COMMISSION DECISION

Application For Certification For

BASIC AMERICAN FOODS' AMERICAN 1 COGENERATION PROJECT

Docket No. 85-AFC-5

JUNE 1987

CALIFORNIA ENERGY COMMISSION

George Deukmejian, Governor

P800-87-007

Committee Members

Barbara Crowley, Presiding
Robert Mussetter, Commissioner

Hearing Advisers Office

Stanley Valkosky
Chief Hearing Adviser

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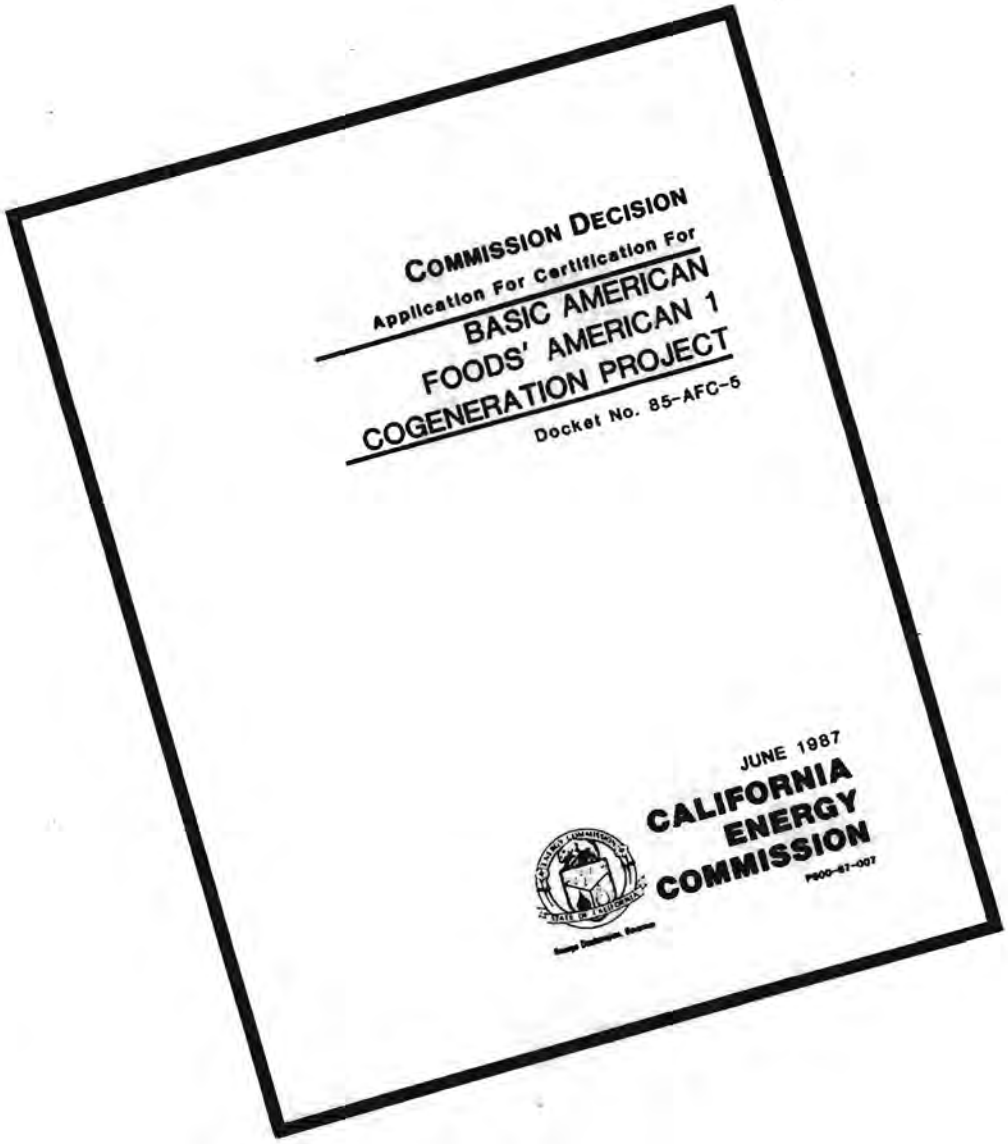

Committee Members

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Hearing Advisers Office

Stanley Valkosky
Chief Hearing Adviser

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

ORDER NO. 93-0728-03(c)

STATE OF CALIFORNIA

Energy Resources Conservation
and Development Commission

In the Matter of:	)	Docket No. 85-AFC-5
	)	(P800-87-007)
	)	
BASIC AMERICAN FOODS	)	Order Approving Amendment
AMERICAN I COGENERATION	)	of Air Quality Condition
FACILITY	)	of Certification 1-20
	)	

Basic American Foods Energy Incorporated (BAF) has submitted a request to the California Energy Commission (the Commission) to amend Air Quality Condition 20. The proposed amendment request allows BAF to: 1) train new operators on the auxiliary boiler's oil firing system; and 2) perform the maintenance required to ensure rapid and reliable transition from gas to oil firing during a disruption of the natural gas supply.

Air Quality Condition 20 allows the use of No. 2 fuel oil only during periods of natural gas curtailment by the utility, or in the event of natural gas supply malfunction or disruption, and then for only 240 hours per year per boiler. The proposed amendment will allow BAF to test each boiler, two times per calendar year, not to exceed two full-load equivalent hours in any calendar day. BAF does not propose to exceed the presently permitted maximum number of hours allowed per year for the auxiliary boilers when firing with No. 2 fuel oil.

The Monterey Bay Unified Air Pollution Control District will be notified 30 days in advance of the proposed testing operations and reserves the authority to postpone testing operations due to adverse ambient air quality conditions.

STAFF RECOMMENDATION

Staff has analyzed the amendment request and based on its analysis, recommends that the Commission adopt this order. No potential new or additional unmitigated significant impacts are anticipated as a result of the use of No. 2 fuel oil for training and maintenance.

Based upon staff's analysis and recommendation, the Commission finds:

- The proposed changes are consistent with the overall intent of the BAF American I Decision;

- The proposed changes are beneficial to the public and the interest of any previous parties to the certification proceeding;

Verification: The District shall be notified a minimum of 30 calendar days prior to the date of training/testing on No. 2 fuel oil. Basic American Foods shall submit the fuel oil firing records to the District at the time of permit renewal, and shall submit the records to the CEC in their Annual Compliance Report to the CEC CPM.

Date: July 28, 1993

Energy Resources Conservation and Development Commission

Barbara Crowley

BARBARA CROWLEY, Vice Chair

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

STATE OF CALIFORNIA

Energy Resources Conservation
and Development Commission

In the Matter of:	Docket No. 85-AFC-5 (P800-87-007)
BAF ENERGY, INCORPORATED AMERICAN I COGENERATION FACILITY	Order Approving Amendment of Air Quality Condition of Certification 1-44
	ORDER NO. 94-0316-10(i)

BAF Energy, Incorporated (BAF) has submitted a request to the California Energy Commission (CEC) to amend Air Quality Condition 44. The request is to discontinue ambient carbon monoxide (CO) monitoring at the King City ambient air monitoring station.

During the certification of this project, background ambient air quality data was only available in the Salinas area, where the project emission would not directly impact. Therefore, Condition 44 requires BAF 1) to operate a ambient air station in King City where the project is located; 2) to monitor CO, in addition to other pollutants, on a continuous basis for the life of the project, or until the Air Pollution Control Officer (APCO) determines that good cause exists to discontinue the monitoring of a pollutant; and 3) to report the collected ambient air data monthly, to the Monterey Bay Unified Air Pollution Control District.

During the last five years, the ambient air concentration of CO at the King City station has been consistently lower than the concentration at the county-operated monitoring station in Salinas. Therefore, the need to measure the ambient CO concentration is not as critical as it appeared to be at the time the project was certified, i.e., the CO concentration data at the Salinas monitoring station conservatively reflects the ambient CO concentration at the King City site.

Because of the continually low concentrations of CO reported at the King City station, the APCO has determined that the ambient CO monitoring may be discontinued. However, BAF will be required to continue to monitor for NO_2, PM_{10}, O_3, and standard meteorological parameters as prescribed in Air Quality Condition 44.

STAFF RECOMMENDATION

Staff has analyzed the amendment request and, based on its analysis, recommends that the Commission adopt this order. No potential new or additional unmitigated significant impacts will occur as a result of the discontinuance of ambient CO monitoring.

Based upon staff's analysis and recommendation, the Commission finds:

- The proposed changes are consistent with the overall intent of the BAF American I Decision;
- The proposed changes are beneficial to the public, applicant, or intervenors;
- BAF and the Monterey Bay Unified Air Pollution Control District are in agreement with the proposed changes;
- The proposed changes are based on information that was not available to the parties prior to Commission certification; and
- There will be no new or additional significant environmental impacts associated with the proposed changes.

CONCLUSION AND ORDER

The California Energy Commission hereby adopts staff's recommendations and findings as its own, and orders that Air Quality Condition 1-44 as contained in the July 8, 1987 Commission Decision for the American I Cogeneration Facility be amended as set forth herein.

Air Quality

1-44. DOC Condition 35: BAF, Energy, Inc. shall cause to be operated an ambient monitoring station at a site approved by the Air Pollution Control Officer, for NO_2, PM_{10}, O_3 and standard meteorological parameters on a continuous basis, in accordance with the EPA requirement contained in 40 CFR 58, and in accordance with the California Air Resources Board guidelines as deemed necessary, for the life of the project or until the Air Pollution Control Officer determines that good cause exists to discontinue the monitoring of a pollutant. Data gathered pursuant to this Condition shall be reported to the Air Pollution Control District on a monthly basis, no later than 30

days from the end of the month during which data is collected.

Verification: No Change.

Date: March 16, 1994

Energy Resources Conservation and Development Commission

CHARLES R. IMBRECHT, Chairman

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

ORDER NO. 92-0729-11(a)

STATE OF CALIFORNIA

Energy Resources Conservation
and Development Commission

In the Matter of:	)	Docket No. 85-AFC-5C
	)	(P800-92-00)
Basic American Foods'	)	Order Approving
American I Cogeneration Facility	)	Modification of Air Quality
	)	Condition of
	)	Certification 1-8

Basic American Foods Energy, Inc. (BAF) has submitted a request to the California Energy Commission (the Commission) to amend Air Quality Condition of Certification 1-8 to reflect a change in the total number of operating hours for the two auxiliary boilers at BAF's American I Cogeneration Facility in King City. The amendment request proposes to 1) change the total number of operating hours for the two auxiliary boilers at BAF's American I Cogeneration Facility, and 2) tie the operation of the auxiliary boilers to the turbine operation.

The boilers were certified to operate at a capacity not to exceed 1500 full load equivalent hours per year per boiler during the core operating profile (the operating profile under the dispatchable mode of BAF's Power Purchase Agreement); and 466 hours per year per boiler during the continuous base load operation.

BAF proposes to limit the operation of both auxiliary boilers to 932 full-load equivalent hours during gas turbine firing. In addition to the 932 full-load equivalent hours, the auxiliary boilers may operate whenever the gas turbine is not operating. Periods of gas turbine start-up and shut-down are included as hours of allowable auxiliary boiler operation.

STAFF RECOMMENDATION

Staff has analyzed the amendment request and has made a recommendation of acceptance to the Commission. No potential new or additional unmitigated significant impacts are anticipated as a result of the change in the total number of operating hours for the two auxiliary boilers at the American I Cogeneration Facility.

Staff has concluded that the amendment is noncontroversial in nature, and, based upon staff's analysis and recommendation, the Commission finds:

- The proposed modification of the total number of operating hours for the two auxiliary boilers is consistent with the overall intent of the BAF American I Cogeneration Facility;

- The proposed modification of the total number of operating hours for the two auxiliary boilers does not appear to harm the public or the interest of any previous parties to the certification proceeding;

- BAF, Commission staff and the Monterey Bay Unified Air Pollution Control District (MBUAPCD) are in agreement with the proposed modification;

- The proposed modification of the total number of operating hours for the two auxiliary boilers is based on information that was not available to the parties prior to Commission certification; and

- With the inclusion of an emission cap of 133.40 tons of NO_x per year, there will be no new or additional environmental impacts associated with the proposed modification of the total number of operating hours for the two auxiliary boilers.

CONCLUSION AND ORDER

The California Energy Commission (CEC) hereby adopts staff's recommendations and findings as its own, and based upon Basic American Foods' (BAF) request to modify the total number of operating hours for the two auxiliary boilers at the American I Cogeneration Facility, orders that Air Quality Condition 1-8 as contained in the July 8, 1987 Commission Decision for the American I Cogeneration Facility be amended as set forth herein.

Air Quality

1-8. The maximum annual NO_x emission cap for the combined or individual operation of the gas turbine and/or the boiler(s) shall not exceed 133.40 tons per year. Start-up and shut-down emissions are not included in the annual NO_x emission cap. Within this cap, the two auxiliary boilers can operate whenever the gas turbine is not operating. Additionally, and within the same annual cap, during periods of gas turbine firing, the total number of operating hours of both auxiliary boilers shall not exceed 932 full load equivalent hours per year. Start-up and shut-down periods of the auxiliary boilers shall be included in the calculated boilers' operating hours.

Verification: BAF shall monitor and record in a log on site for each month of the operation, the following information for natural gas and oil firings: 1) the hours of simultaneous operation of either one or both boilers with the gas turbine; and 2) the total number of tons of NO_x emissions from the operation of the turbine and/or boilers. BAF shall submit an annual compliance report to the MBUAPCD and the CEC prior to the time of operating permit renewal. Records will be

available on-site for both the district and CEC review for a period of three years. The terms of this Condition shall be monitored as described in DOC Conditions 17, 19, 29, and 30.

Date: July 23, 1992

CHARLES R. IMBRECHT
Chairman

STATE OF CALIFORNIA—THE RESOURCES AGENCY GEORGE DEUKMEJIAN, Governor

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND
DEVELOPMENT COMMISSION

IN THE MATTER OF: BASIC AMERICAN FOOD'S AMERICAN 1 COGENERATION PROJECT	Docket No. 85-AFC-5 (P800-87-007) ORDER APPROVING AMENDMENT OF DEMAND CONFORMANCE CONDITIONS OF CERTIFICATION 1 AND 2

The California Energy Commission (Commission) received a request from BAF Energy Inc. to modify the Commission Decision for the American 1 Cogeneration Project for Demand Conformance Conditions of Certification 1 and 2. The requested changes will transfer $20,510 in unused funds from Condition 2 to Condition 1, and change the list of projects and the funding specified in Condition 1.

Based upon staff's analysis and recommendations, the Commission finds:

1. The proposed changes are consistent with the overall intent of the Commission Decision for the American 1 project.

2. The proposed changes do not appear to harm the public interest or the interest of any party to the certification proceeding.

3. The proposed changes are based on information which was not reasonably available to the parties prior to certification.

4. Staff has not received any negative comments from interested parties notified of this proposed change.

5. There are no significant unmitigated environmental impacts associated with these changes.

CONCLUSION AND ORDER

The Commission hereby orders that the Commission Decision for the American 1 Cogeneration Project (85-AFC-5), Demand Conformance Conditions of Certification 1 and 2, be amended to read as follows:

1. BAF Energy Inc. (BAF) shall provide $320,510.00 in funding for 1) King City to purchase a low-emission fuel fire truck; 2) implementation of CEC staff approved energy conservation measures at King City facilities; and 3) implementation of CEC staff approved energy conservation measures at King City schools.

Verification: BAF shall provide CEC staff with copies of all contract agreements, to which they are a party, pertaining to the implementation of this condition. BAF shall, by June 30, 1991, provide CEC staff with appropriate documentation to show that all of the funds specified in this condition have been expended as prescribed. CEC staff shall obtain copies of contracts from King City and the King City schools to verify implementation of the CEC staff approved energy conservation measures.

If for any reason King City or the King City schools do not enter into contractual agreements for the implementation of energy conservation measures or they fail to implement the energy conservation measures within a reasonable amount of time, BAF and CEC staff shall bring the matter before the CEC's Siting and Regulatory Procedures Committee for consideration of an equivalent alternative.

2. BAF shall provide $14,490.00 to King City to cover the cost of removing the City's existing corporation yard underground gasoline storage tanks, and the removal of contaminated soil caused by leaking tanks.
Verification: BAF shall, upon completion of the work, provide CEC staff with proof of payment to King City for the tank removal and clean-up cost.

Date: 8 Jan 1991

Barbara Crowley
BARBARA CROWLEY

STATE OF CALIFORNIA

State Energy Resources
Conservation and Development Commission

In the Matter of:	
Application for Certification for Basic Foods' AMERICAN 1 COGENERATION PROJECT	Docket No. 85-AFC-5 COMMISSION DECISION

The Commission Decision in the above-captioned matter is based upon the evidentiary record of these proceedings (Docket No. 85-AFC-5). The following text contains a summary of the proceedings, the evidence presented, and the rationale for the findings reached and conditions imposed. The Decision includes this narrative text, conditions, compliance verifications, and appendices.

FINDINGS

The Commission hereby adopts the following findings in addition to those contained in the accompanying text:

1. The proposed facility is in conformity with the 12-year forecast of statewide and service area electrical power demands and the integrated assessment of need adopted by the Commission in the 1985 Electricity Report pursuant to Public Resources Code sections 25305(e) and 25309(b).

2. The Conditions of Certification and Compliance Verifications contained in the accompanying text, if implemented by Applicant, ensure that the project will be designed, sited, and operated in conformity with applicable local, regional, state and federal standards, ordinances, regulations and laws, including applicable public health and safety standards, and air and water quality standards.

3. Implementation of the Conditions of Certification and Compliance Verifications contained in the accompanying text will ensure protection of environmental quality and assure reasonably safe and reliable operation of the facility. The Conditions of Certification also assure that the project will not result in any significant adverse environmental impacts.

4. Because the proposed facility is not within the coastal zone or other areas with recreational, scenic, or historic value, no additional Conditions have been specified by the California Coastal Commission or the San Francisco Bay Conservation and Development Commission pursuant to Public Resources Code section 25523, subdivisions (b) and (c), nor are any other special Conditions or mitigations required.

5. The existing governmental land use restrictions are sufficient to adequately control population density in the area surrounding the facility and may be reasonably expected to ensure public health and safety.

ORDER

Therefore, the Commission ORDERS as follows:

1. The Application for Certification for the AMERICAN 1 Cogeneration Project and associated facilities described in this Decision is hereby approved.

2. The approval of the AMERICAN 1 Application for Certification is subject to the timely performance of the Conditions of Certification and Compliance Verifications enumerated in the accompanying text and Appendices, including operation within the statutory definition of "cogeneration" set forth in Public Resources Code section 25134. The Conditions and Compliance Verifications are integrated with this Decision and are not severable therefrom. While Applicant may delegate the performance of a Condition or Verification, the duty to ensure adequate performance of such may not be delegated.

3. For purposes of reconsideration pursuant to Public Resources Code section 25530, this Decision is deemed adopted when filed with the Commission's Docket Unit.

4. For purposes of judicial review pursuant to Public Resources Code section 25531, this Decision is final: (a) thirty (30) days after its filing in the absence of the filing of a petition for reconsideration; or (b) if a petition for reconsideration is filed

within thirty (30) days, upon the adoption and filing of an Order upon reconsideration with the Commission's Docket Unit.

5. The Commission hereby adopts the accompanying Conditions of Certification, Compliance Verifications, and associated dispute resolution procedures as part of this Decision in order to implement the compliance monitoring program required by Public Resources Code section 25532.

6. Each Condition described in the Compliance section is followed by a means of "Verification". The Verifications are not intended to be a part of the Conditions, but are the Compliance Unit's procedures to ensure post certification compliance with adopted Conditions. The Verification procedures may be modified by Staff as necessary to carry out the compliance monitoring mandate, without Commission approval.

7. The Executive Director of the Commission shall transmit a copy of this Decision and appropriate accompanying documents as provided by Public Resources Code section 25537 and California Administrative Code, Title 20, section 1768.

Dated: July 8, 1987

ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

(ABSENT)
CHARLES R. IMBRECHT, Chairman

BARBARA CROWLEY, Vice Chair
and Presiding Committee Member

(ABSENT)
WARREN D. NOTEWARE, Commissioner

ROBERT MUSSETTER, Commissioner
and Second Committee Member

RICHARD A. BILAS, Commissioner

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COMMISSION DECISION

American 1 Cogeneration Project

PART ONE: PROJECT, ALTERNATIVES, AND PROCEEDINGS SUMMARY

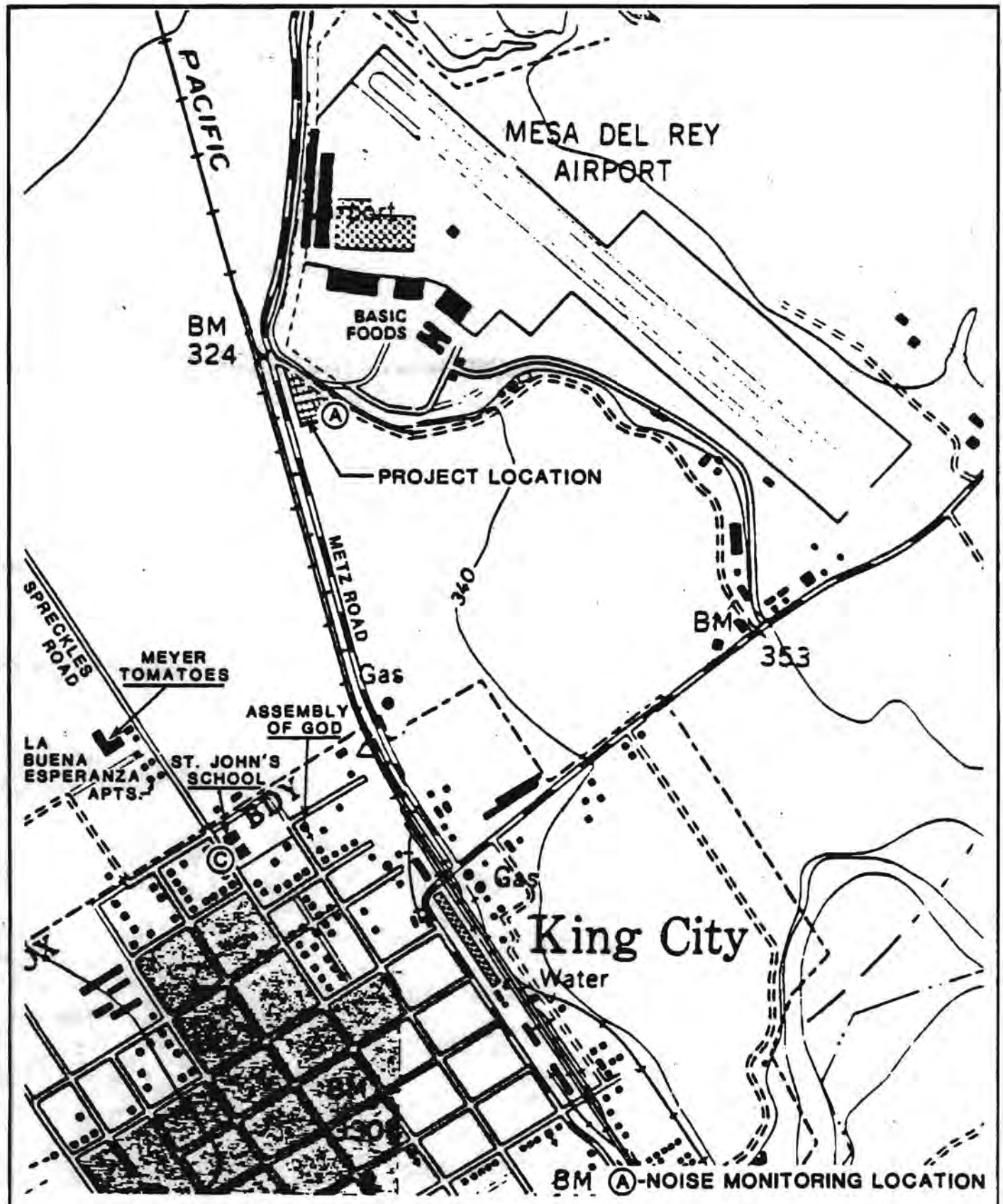
A. PROJECT OVERVIEW

Basic American Foods is the Applicant for the proposed American 1 Cogeneration Project. This project is a 120 MW facility which would produce steam for Basic's food processing plant during the vegetable drying season (mid-May through October) and electricity for sale to Pacific Gas and Electric Company (PGandE). Basic anticipates construction would take fifteen months following final licensing.

1. Location

The proposed project will be located in King City, Monterey County. King City is located along Highway 101, approximately 45 miles southeast of Salinas. The project site is a 7-acre, triangular plot in an industrial development zone. The existing food processing plant is at the northeast edge of the site. The western edge is bordered by Metz Road and the Southern Pacific Railroad tracks, and the south side adjoins a cultivated field (see Map 1).

MAP 1



Project Location

Source: Adapted from Basic (1985) AFC Figure 10.2-1.

2. Purpose

The primary objective of the proposed facility is to provide up to 190,000 pounds per hour of process steam while coproducing up to approximately 120 MW of electricity for sale to PGandE. The process steam would be used in Basic's existing vegetable drying operations.

3. Major Project Components

The American 1 Project will consist of one 85.5 MW combustion turbine generator (CTG) with steam injection and selective catalytic reduction (SCR) for nitrogen oxide (NO_x) emission control, one steam turbine generator (producing from 20.6 MW to 36.4 MW), one heat recovery steam generator, and ancillary support equipment. PGandE will supply the natural gas for the gas turbine and auxiliary boilers by interconnecting with an existing pipeline located along Metz Road. The auxiliary boilers will be equipped with carbon monoxide (CO) catalysts. Two new water wells will supply the boiler makeup water.

Number 2 fuel oil for emergency backup for the CTG and auxiliary boilers will be stored on-site. Ammonia for the SCR system will be stored on-site in a 6,000 gallon storage tank. Other tanks will provide storage for acid, caustic, and sodium chloride for the water demineralizer train (See Figure 1).

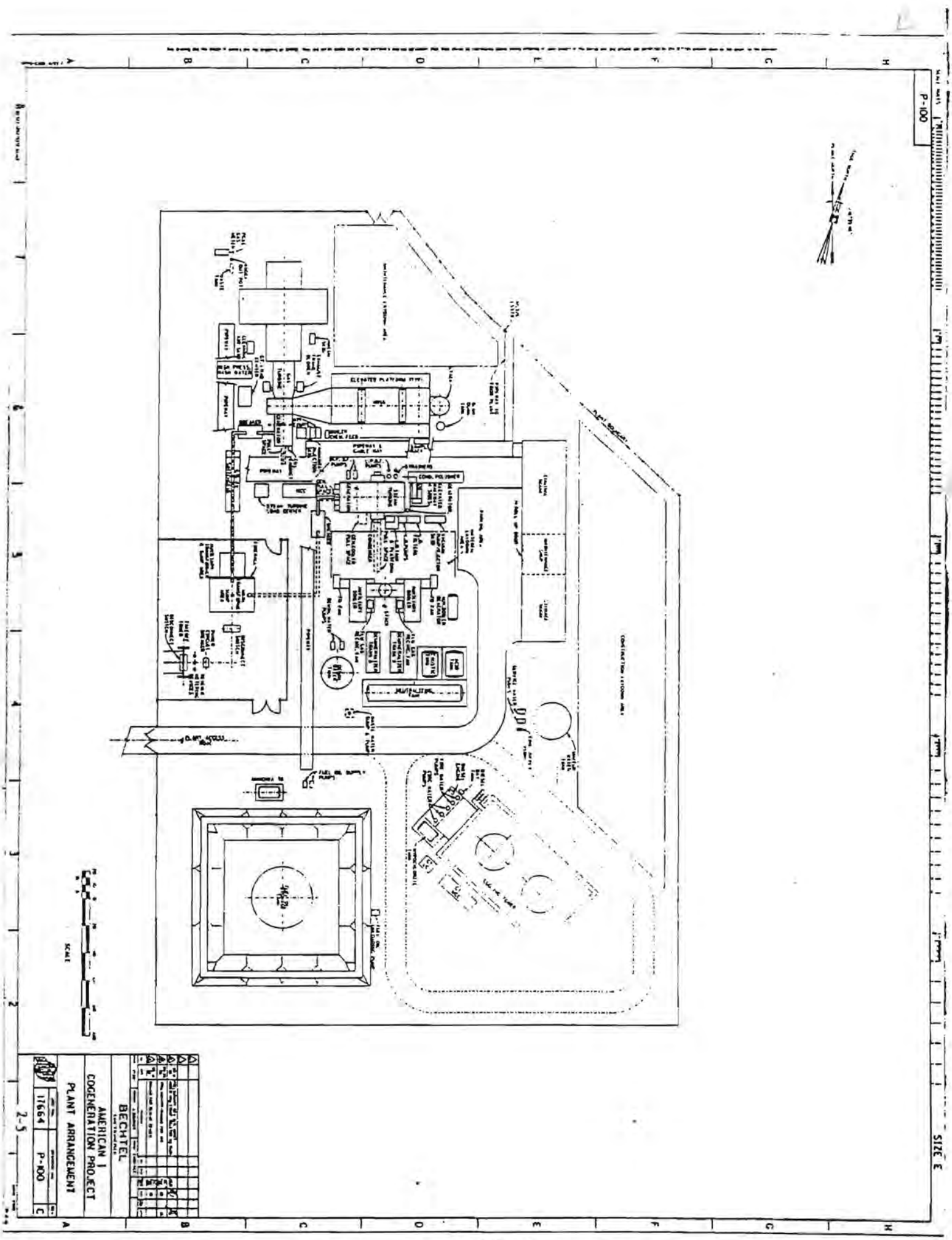


FIGURE 1
Source: July 11, 1986 AFC Amendment

4. Transmission Facilities

A 60 kV wood pole transmission line will carry the electrical power produced by the project to the Coburn Substation, 3.2 miles north of the project site where the power will be integrated into PGandE's 230 kV system. The preferred transmission line route, designated as Alternative Route 1,[1] follows the east side of the Southern Pacific Railroad right-of-way to Coburn Substation. The existing 12.3 kV line would be rebuilt to accommodate the new 60 kV line, and an existing 60 kV line (feeding into Coburn Substation) would be upgraded to 115 kV.

B. PROJECT ALTERNATIVES

Title 14 of the California Administrative Code, section 15126(d), requires an evaluation of reasonable alternatives to the proposed project, including a "no project" alternative, which are capable of eliminating any significant adverse environmental effects or reducing them to acceptable levels.

Succeeding sections of this Decision discuss, by topic area, the potential environmental impacts of the project and the sufficiency of proposed mitigation measures. The following discussion summarizes the general merit

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1. Alternative transmission line Route 2, which partially runs along the west side of Metz Road, was also discussed in the evidentiary hearings; the Commission has, however, approved only Route 1. See also, "Transmission Line Engineering" discussion, infra.

and acceptability of identified alternatives to the proposed project, as well as their ability to meet project objectives.

1. No Project

Although the no-project alternative would eliminate any environmental impacts of the proposed project, it would not meet the objectives of supplying reliable and economical steam to the food processing plant and cogenerating electricity for sale (Dec. 3, 1986 RT 474). Moreover, and as described in subsequent portions of this Decision, the project will create no adverse unmitigated impacts to the physical environment of a degree sufficient to warrant consideration of the "no project" alternative.

2. Alternative Locations

In order to meet project objectives of providing process steam for Basic's food processing operations, the cogeneration facility must be located in close proximity to the food processing plant. Because moving the facility to another location near the food processing plant would not eliminate or reduce any significant environmental impacts, consideration of alternative locations is not pertinent (Dec. 3, 1986 RT 474).

3. Alternative Technologies

Alternative technologies similarly appear infeasible either because they are unavailable, as in the case of geothermal technologies; because they

cannot reliably and continually produce steam, as in the case of solar thermal technologies; or because they cannot directly produce steam, as in the case of wind technologies. The gasification of coal and crude oil would result in higher pollutant emissions and greater land requirements when compared to the proposed project and, hence, are less preferable. Fuels such as coal, petroleum coke, and crude oil are not reasonable alternatives because of the larger land requirements and higher resultant pollutant emissions. Biomass is not available in sufficient quantities with a high enough Btu content to make it a reasonable alternative fuel (Dec. 3, 1986 RT 474-475).

4. Thermally Matched Facility

Commission staff explored the viability of a "thermally matched" cogeneration system. Theoretically, such a facility would produce only that amount of electrical energy necessary to coproduce the process steam required for the project's industrial use. This analysis takes into account technological and economic feasibility as well as environmental impacts, and compares a hypothetical "thermally matched" facility with the proposed project.

Staff initially opined that an alternative "thermally matched" system, generating only a maximum of 71 MW (net) of electrical power, would be feasible and would still produce up to 200,000 pounds per hour of process steam (Dec. 3, 1986 RT 214). Conceptually, Staff concluded that the system would be technologically achievable, would qualify as a topping cycle cogeneration facility, and would meet statutory cogeneration criteria (Dec. 3,

1986 RT 216, 221, 229-230). While Staff did not draw any definite conclusions as to the economic feasibility of the thermally matched system (Dec. 3, 1986 RT 229), it did recommend Applicant perform a financial analysis based upon the life of the project or the term of debt (Dec. 3, 1986 RT 268).

The Applicant disputed the economic feasibility of the alternative system. Based upon a simplified economic analysis, the Applicant contended the thermally matched facility would not attract financing, nor would the after-tax return on equity (6.0 percent) be acceptable for investment ventures such as a cogeneration project (Dec. 3, 1986 RT 195, 196). The Committee requested corroboration of this purported inability to finance the "thermally matched" alternative.

Staff re-evaulated its position, including certain economic factors such as analysis under the revised operating modes (contained in the December 30, 1986 Amendment) and the minimum acceptable return on investment and pre-debt coverage ratio necessary to obtain financing. Staff concluded that the "thermally matched" facility could exceed the minimum economic requirements as well as the statutory operating and efficiency standards. Staff, however, specifically declined to propose the "thermally matched" facility as an alternative to the American 1 Project (Dec. 3, 1986 RT 480; Feb. 23, 1987 RT 41, 43). Moreover, both parties agreed to the reasonableness of the financial screening criteria used by Applicant, and confirmed by its financial advisor (Feb. 23, 1987 RT 66-68; Exhibit 36).

5. Transmission Alternatives

Staff recommended use of a larger conductor to reduce energy losses at the transmission line outlet and reduce the present worth of total costs; Applicant agreed to this measure (Dec. 3, 1986 RT 466, 476), and the Commission has incorporated it as part of the "Transmission Line Engineering" Conditions of Certification, infra.

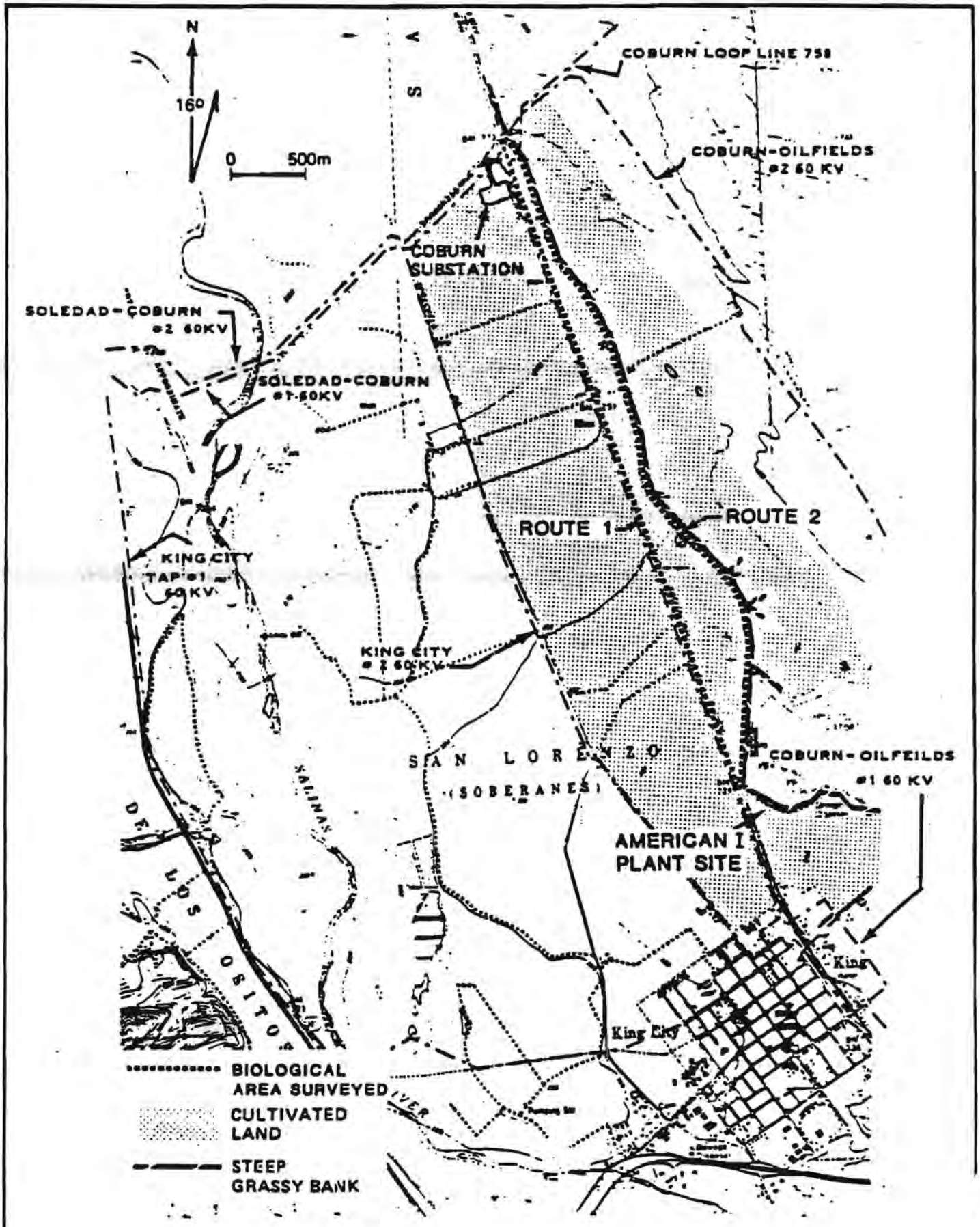
Applicant originally proposed two alternative transmission line routes to the Coburn Substation (see Map 2). Alternative 1, running along the existing Southern Pacific Railroad right-of-way, contains very little natural vegetation and no significant wildlife habitat. Alternative 2, which runs partially along the west edge of Metz Road, would necessitate establishing a new right-of-way. Furthermore, this route could impact biological resources, including one of the two swallow colonies in Monterey County. Because Alternative 1 uses an existing right-of-way and will have less impact on biological and visual resources, the parties agree it is preferable (Nov. 6, 1986 RT 3, 20; Dec. 3, 1986 RT 476). The Committee therefore recommended approval of only Alternative Route 1, and the Commission concurs. (See also, discussions in the "Biological Resources", "Land Use", "Transmission Line Engineering", and "Visual Resources" portions of this Decision).

FINDINGS

Based upon the evidence of record, the Commission finds:

1. The primary project goals are to coproduce process steam for use in Basic's existing vegetable drying operations and electricity for sale to PGandE.

MAP 2



TRANSMISSION LINE ENGINEERING: FIGURE 2
General Area Map

2. Assuming compliance with the Conditions of Certification contained in this Decision, the proposed project will accomplish its stated goals without creating significant adverse effects to the physical environment.

3. The evidence of record does not support further analysis of any identified alternative to the American 1 Cogeneration Project.

4. The Applicant employed reasonable financial screening criteria for the proposed project.

C. PROCEEDINGS TO DATE

The Applicant submitted the Application for Certification (AFC) for the American 1 Cogeneration Project on September 20, 1985 for review under Public Resources Code section 25540.6(a). This statutory provision, as interpreted by 20 California Administrative Code section 1765, provides that a thermal power plant which does not exceed 300 MW shall be exempt from a Notice of Intention proceeding and shall be evaluated on a twelve-month licensing schedule.

The Executive Director published notice of the receipt of the AFC on October 3, 1985. As a result of the data adequacy review by Staff and in response to Commission findings of inadequacy, the Applicant filed several supplements to the AFC.[2] The last supplement was filed on February 11, 1986

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2. The Executive Director first notified the Applicant of data deficiencies on October 21, 1985, which list of deficiencies was adopted by the Commission on October 30, 1985. The Commission also identified deficiencies subsequently, on November 19, 1985. Applicant then submitted additional information on December 6 and 9, 1985, and was informed by the Executive Director (letter dated December 31, 1985) that supplemental information was yet required. The Commission received the final supplementary information on February 11, 1986.

and, at its February 19, 1986 business meeting, the Commission determined the AFC to be complete as of that filing date.

On March 4, 1986, the Committee issued a Notice to Public Agencies and Request for Information, pursuant to 20 California Administrative Code sections 1714 and 1714.5. By separate notice (also published in local newspapers), the Committee scheduled an Informational Presentation and Site Visit for April 10, 1986, in King City. At this event Applicant explained its project, and the Commission staff explained its role in the licensing process.[3]

On April 16, 1986, the Committee issued an "escrow recommendation" that the Commission allot a sufficient increment from the "unspecified reserved need" category to the proposed project and that demand conformity for the project be assessed under the "unspecified reserved need" criteria in the Fifth Electricity Report (ER 5). The Commission adopted this recommendation at its April 30, 1986 business meeting.[4]

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3. The Commission staff also independently conducted public workshops to discuss various aspects of the American 1 Cogeneration Project: October 15, November 12, and December 2, 1985; January 14, February 4, March 26, April 14 and 21, May 8, 16, 23 and 30, June 13, July 18, August 11, 14, 15, and 21, September 4 and 19, October 6, 22 and 24, November 19, and December 4 and 11, 1986; January 5 and 23, and June 5, 1987.

4. The Committee implemented the "escrow" procedure set forth in Appendix 5.1 of ER 5. While the applicable need test is discussed in detail in Part Two of this Decision, infra, it is significant to note that the Committee (and Commission) based assignment of the project to ER 5's "unspecified reserved need" test largely upon a March 26, 1986 stipulation between Staff and Applicant.

The Committee then conducted an Issue Assessment Conference on June 30, 1986, to discuss procedural items as well as to identify potential areas of dispute. Scheduling appeared to be a major concern, as did the topic of "Demand Conformance". In the latter regard, Applicant alluded to its attempts to negotiate an amended Power Purchase Agreement with PGandE (June 30, 1986 RT 5, 8-9), and Staff stated its intention to review project need under ER 5's "system displacement" test (June 30, 1986 RT 22).

The Committee then convened a Prehearing Conference on September 29, 1986. In the interim, Applicant had amended the project several times.[5] At this Conference, discussion focused on the Staff's initial project analysis as contained in the "Preliminary Staff Assessment" (released August 8, 1986) and indicated that potential dispute existed on ten topic areas.[6] The parties also informed the Committee of an anticipated delay in issuance of the Determination of Compliance by the Monterey Bay Unified Air Quality Control District (Sep. 29, 1986 RT 4), and the Applicant indicated its agreement to determining project need under ER 5's "system displacement" test (Sept. 29, 1986 RT 5, 7-8).

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5. Applicant filed an amendment to the AFC on June 5, 1986. It then filed a second amendment on July 11, 1986, modifying the project to include selective catalytic reduction as Best Available Control Technology (BACT) for NO_x control in the gas turbine, and CO catalyst as BACT for the two auxiliary boilers. On August 29, 1986, Basic filed a third amendment to the AFC reflecting changes, most notably, to the project "core operation profile".

6. I.e., Alternatives, Air Quality, Cogeneration Criteria, Demand Conformance/Need, Public Health, Reliability, Structural Engineering, Thermal Matching, Transmission Line Engineering, and Transmission System Evaluation (Sept. 29, 1986 RT 6-7).

On October 10, 1986, the Committee noticed evidentiary hearings for November 5 and 6, 1986, a subsequent evidentiary hearing and a second Prehearing Conference for November 24, 1986, and additional evidentiary hearings for December 2 and 3, 1986. On November 25, the Committee revised this Notice, scheduling topics for consideration on December 3, 22, and 23, 1986. This revision in the hearing calendar was due to delays in receiving the final Determination of Compliance[7] and Demand Conformance testimony. Simultaneous with these events, Staff submitted its Final Staff Assessment on December 16, 1986.

At the December 23, 1986 evidentiary hearing, Applicant announced that it had reached preliminary agreement with PGandE concerning amendment of its Standard Offer Power Purchase Agreement (Dec. 23, 1986 RT 92-113; Exhibit 32). Because of insufficient opportunity to review this preliminary agreement, the Committee adjourned the hearing.[8]

The Committee then conducted a Conference on January 27, 1987 to assess the effect of the amended Power Purchase Agreement upon the evidentiary record thusfar established. At that Conference, both Applicant and Staff agreed that the amended agreement would affect only the topics of Air Quality, Cogeneration Criteria, Demand Conformance, Public Health, and Thermal Matching

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7. The final Determination of Compliance was filed on December 3, 1986 (See Dec. 22, 1986 RT 8-53); this document was later amended to reflect lowered NO_x emission rates discussed at the June 11, 1987 hearing.

8. The Applicant filed this amendment, in greater detail, on December 30, 1986. The amendment affected the project's core operating profile and dispatchability provisions. This matter is discussed in greater detail in Part Two of this Decision, infra.

(Jan. 27, 1987 RT 8, 11). The Committee accordingly scheduled additional evidentiary hearings for February 23 and 24, 1987.

The period for submitting final post-hearing briefs ended on March 27, 1987. Applicant, Staff, and PGandE each submitted written argument focused exclusively on the Demand Conformance/Need issue.

The Committee issued its "Presiding Member's Report" (PMR) (Commission Pub. No. P800-87-001) on April 29, 1987, concluding that the Project failed to meet condition 5 of the System Displacement Need test. At the request of Applicant and Staff, the Committee reopened the evidentiary record and received additional comment and testimony on June 11, 1987. That testimony, discussed in subsequent portions of this Decision, centered on the topics of "Demand Conformance" and "Air Quality". The comment period on the PMR formally closed on June 15, 1987. The Committee then issued its "Proposed Decision" on June 19, 1987 and conducted a Conference to receive comments thereupon on July 2, 1987. The full Commission adopted the "Proposed Decision" at its July 8, 1987 business meeting.

A summary of the evidentiary hearings and topics considered follows:

Summary of Evidentiary Hearings
and Topics Considered

November 5, 1986	Civil Engineering, Electrical Engineering, Engineering Geology, Mechanical Engineering, Soil Conservation, Transmission Line Safety and Nuisance, Waste Management, Decommissioning

November 6, 1986	Biological Resources, Cultural Resources, Land Use, Socioeconomics, Traffic and Transportation, Visual Resources, Noise, Water Quality, Water Resources, Waste Management
November 24, 1986	Safety, Ammonia Safety
December 3, 1986	Transmission Line Engineering, Transmission System Evaluation, Cogeneration Criteria, Thermal Matching, Reliability, Structural Engineering, Public Health, Alternatives
December 22, 1986	Air Quality, Demand Conformance
December 23, 1986	Demand Conformance
February 23, 1987	Cogeneration Criteria, Thermal Matching, Public Health, Air Quality, Demand Conformance
February 24, 1987	Demand Conformance
June 11, 1987	Demand Conformance, Air Quality, Transmission Line Safety and Nuisance, Cogeneration Criteria

PART TWO: DEMAND CONFORMANCE

Public Resources Code section 25523(f) requires the Commission reach "[findings regarding the conformity of the proposed facility with the 12-year forecast of statewide and service area electric power demands" adopted as part of the Electricity Report process. Unless these findings are affirmative, the Commission cannot license a facility [Pub. Resources Code, § 25524(a)]. These findings are not based merely upon a rudimentary analysis of the forecasted electricity supply/demand balance, but rather upon a more complex and comprehensive "integrated assessment of need" (see Pub. Resources Code, §§ 25305, 25308, 25309) achieved through evaluating and weighing a spectrum of economic and environmental factors affecting both the utility system and the State as whole. The 1985 California Electricity Report (ER 5) contains the relevant principles guiding this analysis.[9]

To properly interpret these principles, one must first appreciate the context in which the Commission adopted ER 5. That context, for the first time in the history of electricity system generation as regulated by the Commission, was one in which the likelihood of electricity oversupply rather than the fear of inadequate supply emerged as a paramount concern. Whereas the 1983 Electricity Report (ER 4) forecast a continuing need for new generation sources, ER 5 explicitly recognized the extremely limited potential

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9. Although the 1986 Electricity Report (ER 6) has replaced ER 5, the Commission directed (by Order dated January 21, 1987) that the American 1 Project be analyzed under ER 5 in order to avoid substantially delaying the licensing proceeding.

for adding new supply resources to the State's electrical system in general, and to the PGandE system in particular.[10] Whereas the 1986 Electricity Report (ER 6) contains relatively specific criteria[11] for conducting an "integrated assessment of need" (demand conformance) ER 5's criteria remain, by comparison, somewhat more subjective and susceptible to reasonably varying interpretations.

This brief historical perspective shows ER 5 to be a truly transitional document. It embodies the Commission's attempt to discharge statutory directives during a period of profound change - bridging the age from which new energy supply sources were almost uniformly viewed as desirable to the current era in which only a limited need for new supply sources exists. It reflects a transition from the time when federal and state policy firmly encouraged the introduction and development of certain technologies (such as cogeneration) to the period in which responsible regulators must seriously question whether the detrimental effects caused by unrestrained development in

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10. ER 5 states at page 84:

> Simply stated the message of this report is that: (1) there is an abundance of supply projects currently proposed by many sponsors; (2) these projects substantially exceed total need; (3) many more baseload projects are being proposed than are needed; and (4) many of these projects could increase electricity rates since they do not match the load duration curve of the utility. Therefore, economic and environmental burdens may be imposed through the premature construction and operation of unneeded facilities.

ER 5 also recognized that the "Northern California planning area" [including PGandE] "has energy resources exceeding its needs" (Id. pp. 71-73).

11. See 1986 Electricity Report (ER 6), pp. 6-5 through 6-12.

fact outweigh benefits bestowed upon the State. Finally, it marks the change from a time when the California Public Utilities Commission (CPUC) scrutinized the ratepayer impact of individual projects proposed by utility applicants to an age in which the CPUC reviews the ratepayer impacts of projects proposed by private party applicants only on a generic basis. The Commission has based its analysis of the American 1 Project solely upon ER 5's principles; it is, however, aware of the the steps taken in ER 6 to further this transition.

A. ER 5 OVERVIEW

Recognizing the limited opportunity for new resource additions, ER 5 imposed an ascendingly difficult series of tests to establish demand conformance and, hence, satisfy Public Resources Code sections 25523(f) and 25524(a). These tests (captioned the "Specified Reserved Need" [SRN], "Unspecified Reserved Need" [USRN], "Reserved Need Displacement" [RND], and "System Displacement Need" [SDN] tests), while comprised of certain similar conditions, are distinguishable by the choice and content of their individual component conditions. The tests are, in effect, both derivative in the sense that various conditions are common to one or more of the tests and additive in the sense that certain tests contain conditions additional to those found in

other tests.[12] While the proper interpretation of the various tests has been extensively debated in siting cases conducted under ER 5 -- and indeed was so debated in the present case--it is important to realize these tests must be interpreted consistently with the overall goals of ER 5.

Although ER 5 expresses many goals of arguably comparable dignity, it appears to stress limiting the addition of baseload or "must run" resources[13] to the utility system and ensuring that any power plants added to the system in fact possess environmental and economic characteristics which benefit the State. The desire to limit additions of "must run" facilities is essentially

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12. The following schematic represents the derivative and additive nature of ER 5's need tests (see also, ER 5, pp. 87-94):

Test:	SRN	USRN
Condition	1. unfilled reserved need exists	1. unfilled unspecified reserved need exists
	2. not exceed reserved need	2. avoided cost (for QFs)
	3. avoided cost (for QFs)	3. matches load
	4a. matches load; or	4a. remaining total need; or
	4b. overall benefit on balance	4b. oil and gas displacement

Test:	RND	SDN
Condition	1. changed circumstances	1. avoided cost (QFs)
	2. avoided cost (for QFs)	2. matches load
	3. matches load	3. oil and gas displacement
	4. remaining total need or oil and gas displacement	4. overall benefit on balance
	5. overall benefit on balance	5. provides significant economic and environmental benefits

13. For purposes of the present general discussion, "baseload" refers to power plants which are operated over a substantial portion of the 8760 hours of a year; "must run" refers to those facilities over which the utility has little or no operational control, and from which it must purchase power whenever produced.

operational in nature. As discussed at length in both ER 5 and ER 6,[14] California (and especially the PGandE area) is currently faced with surplus power due in large part to successful development of Qualifying Facilities (QF) under the federal Public Utility Regulatory Policies Act (PURPA).[15] Unfettered QF development would lead to a substantial excess of energy and capacity. This in turn would result in unnecessary environmental impacts from project construction and operation, as well as excessive utility system and ratepayer costs. Compounding the situation is the fact that, at the time ER 5 was developed, many QF projects possessed "Standard Offer" contracts making these projects operationally equivalent to "must run" facilities. These contracts effectively required utilities to take the power generated at times when alternative sources of power, either less expensive or more environmentally benign, were available.

ER 5 addresses this situation through the imposition of the various conditions contained in its need tests. To ensure power is reasonably priced, ER 5 requires pricing at "avoided cost."[16] The physical/operational conditions ("load match" and "oil and gas displacement")[17] are fundamentally intended to restore a measure of flexibility to the state's utility system

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14. See generally, ER 5, chapters 4, 5, and 6; ER 6, chapter 1, section 1.2; chapter 6.

15. 16 U.S.C.A. §§ 824 ff.

16. The "avoided cost" criterion is common to all ER 5 need tests and is discussed at length, infra, under Condition 1 of the System Displacement Need test.

17. The "load match" condition is common to all ER 5 need tests; the "oil and gas displacement" condition appears in all tests save the most lenient, the Specified Reserved Need test. See footnote 12, supra.

operators and to ensure less costly resources are not curtailed to accommodate QF power. These latter criteria have given rise to the concept of "dispatchability" which, in general terms, equates with the system operator's ability to choose whether or not to accept power from a QF at a particular point in time.[18] Finally, ER 5 acknowledges the possibility that an individual facility, even though not needed to ensure an adequate and reliable supply of electricity, may possess other characteristics sufficiently beneficial to warrant certification.[19] Simply put, the transition provided through ER 5 appears intended to provide greater control over QF projects by utilities and to ensure that permitted projects provide desirable economic and environmental characteristics.[20] The application of these general principles

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18. ER 5 discusses "dispatchability" in general terms at pp. 125-26; ER 6 defines the term at page 6-6, footnote 2, as "the ability of the purchasing utility to physically curtail the output of the facility when either less expensive supplies are available or the power cannot be taken by the utility system without forcing the curtailment of core resources. Dispatchability should also permit the utility to call up the output of the facility when it is needed."

19. This criterion appears, at a balancing level, in three of ER 5's need tests, and as an independent affirmative criterion only in the System Displacement test; see footnote 12, supra. ER 6 also recognizes this concept at pages L-18 to L-20.

20. As previously mentioned, ER 5 discusses the general desirability of providing system flexibility via dispatchability. In furtherance of this goal, the Commission has required power plants certified under ER 5 to provide dispatchable operations; see Commission Decisions on the Gilroy Cogeneration Facility, Docket No. 84-AFC-4, November 13, 1985 (Commission Pub. No. P800-85-011); the ARCO-Watson Cogeneration Facility, Docket No. 85-AFC-1, September 1986 (Commission Pub. No. P800-86-010), and the Sycamore Cogeneration Project, Docket No. 84-AFC-6, December 1986, (Commission Pub. No. P800-86-014). Moreover, the "Presiding Member's Report" on the Crockett Cogeneration Project (Docket No. 84-AFC-3, June 23, 1986, Commission Pub. No. P800-86-005), though not a final disposition of the matter, clearly endorses the concept of dispatchability. The point is that, under ER 5, dispatchability is a significant indicator of a project's operational merit. ER 6 concludes the evolution by effectively requiring QFs to be dispatchable (see ER 6,

to the American 1 Project is discussed in the sections below.

B. The American 1 Project's Operational Evolution

Background. The Applicant executed a long-run "Interim Standard Offer 4" (S04) contract with PGandE on November 30, 1984. This contract defined the project's 30-year operating parameters at the time of the AFC filing and provided the American 1 Project would function as a baseload, "must run" facility, subject to only relatively limited operational control by PGandE (Dec. 22, 1986 RT 194).

Presumably in recognition of the difficulties that such a contract posed in meeting ER 5's demand conformance criteria, Applicant developed a dispatchability proposal based on a "core operating profile" in August 1986. This profile defined both "must run" periods of project operation (coinciding largely with the need for process steam) and periods during which PGandE would maintain operational control. Under this proposal, the project would run for at least 4126 hours of the year, with the remaining 53 percent of yearly hours subject to control by PGandE during the first ten years of operation (Dec. 3, 1986 RT 124; Dec.22, 1986 RT 193). Capacity and energy payments would remain similar to those allowed under the S04 contract. This "core profile" operation did not constitute an amendment to the S04 provisions, but rather remained a voluntary operational limitation offered by Applicant (Dec. 22, 1986 RT 193, 219-20).

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pp. 6-6 to 6-7).

The Committee commenced evidentiary hearings on these matters on December 22, 1986. At that time, Applicant intimated that an amendment to the SO4 contract was possible (Dec. 22, 1986 RT 193). The Committee continued to receive evidence on the pertinent power purchase provisions as they then existed.

At the December 23 hearing, Applicant formally announced that it had reached preliminary agreement with PGandE concerning an amendment to the SO4 contract; this amendment was somewhat different in terms of operating profile than that contained in the "core profile" approach (Dec. 23, 1986 RT 62, 93-107). Although a detailed version was unavailable, Applicant described pertinent points and provided a written outline of the proposed amendment's contractural provisions (Exhibit 32). Both Applicant and PGandE characterized the proposed terms as acceptable. PGandE essentially indicated that no substantive dispute between the parties existed, and that formal execution would be forthcoming shortly (Dec. 23, 1986 RT 93-95). The Committee adjourned proceedings in order to provide Staff sufficient opportunity to review the proposed amendment, and required the parties to file statements (on January 9, 1987) concerning the proposed amendment's impact upon the demand conformance assessment.

Following this hearing, the Applicant submitted a project revision, including various proposed changes to the operating profile, on December 30, 1986. In its January 9, 1987 filing, Staff requested the Committee delay proceedings pending final execution of the amendment. Based upon the representations then before it, and in recognition of the statutory directive

to issue decisions in a timely manner,[21] the Committee denied this request on January 15, 1987.

At the January 27, 1987 Conference, Applicant and PGandE reaffirmed that they did not dispute the substantive contractual provisions, and that the proposed amendment would be expeditiously executed (Jan. 27, 1987 RT 3-7). Due to these representations, the Committee then scheduled demand conformance hearings to evaluate project operations as envisioned in the proposed amendment.

On February 23, 1987, Applicant submitted a unilaterally executed amendment to the S04 power purchase agreement (Exhibit 35). Both Applicant and PGandE clarified that, while the amendment had not yet been fully executed in accordance with prior representations, the remaining matters in dispute did not involve the facility's operating parameters (Feb. 23, 1987 RT 11-12). Further discussion as to whether the disagreement would jeopardize the amendment proved inconclusive (see Feb. 23, 1987 RT 11-14), and the Committee elected to receive evidence based upon the proposed amendment.

Summary of the Proposed Amendment. The proposed amendment would be in effect for 12 years; this equates with the first 10 years of project

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21. Staff requested a period in excess of three months to reanalyze the project ("Staff Statement of Dispatchability Issues and Schedule," January 8, 1987). Public Resources Code section 25540.6 envisions a Decision within 12 months of AFC acceptance; in the present case, that date would have been February 11, 1987. Applicant, though conscious of scheduling considerations, has not objected to the various scheduling extensions. Notably, these extensions were largely due to Applicant's variations to the project as originally proposed.

operation. Following this period, and unless modified by the parties, operation would revert to the underlying SO4 provisions (Feb. 24, 1987 RT 51). The proposed amendment would place the facility under the control of PGandE for some portion of each day of the year, which control could be exercised to coincide with PGandE's lowest period of demand (Feb. 23, 1987 RT 170-71). Overall, the facility would be under PGandE's control approximately 56 percent of the hours of the year as follows:

: all hours from January through April;

: 10 hours per day, 6 days per week and all day Sundays and holidays during October through December; and

: 6 hours per day from May through September (Exhibit 35; see also Applicant's "Opening Brief," p. 6; Appendix B of this Decision).

The capacity price would remain the same as under the SO4 agreement; energy prices would, during a portion of the year, be less than provided by the SO4 contract (Feb. 23, 1987 RT 166-70). Finally, the firm contract capacity would increase from 105 MW to 111 MW (Feb. 23, 1987 RT 162).

Consideration of the Power Purchase Agreement Amendment. The Committee concluded hearings, relying upon the representations of Applicant and PGandE, as well as practice in former siting cases and ER 5's directive that an Applicant proposing to sell power provide a "written agreement or commitment specifying the terms and conditions under which the power is to be sold."[22]

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22. ER 5, p. 88.

Ostensibly, the proposed amendment considered in this proceeding, as supported by clarifying testimony, constitutes a written "commitment."[23]

In its "Presiding Member's Report" (PMR), at pages 23-25, the Committee discussed several available options concerning consideration of the then proposed amendment to the Power Purchase Agreement. While it issued the PMR without having a finally executed agreement, the Committee explicity expressed its strong reservations in so doing, and stated that it would not "...issue a Proposed Decision which recommends certification of the project..." unless an executed amendment or an enforceable alternative means of ensuring dispatchable operations were also submitted.[24]

The Applicant submitted the fully executed amendment to the Power Purchase Agreement on May 29, 1987. This document was offered into evidence on June 11, 1987 (Exhibit 40) and is incorporated as Appendix B of this Decision. It is identical in terms of project operational characteristics to that considered during the February 1987 evidentiary hearings (June 11, 1987 RT 12-13) as described above and in the PMR. The Applicant has therefore complied with the Committee's previous directive, and shall operate the project as set forth in the amended Power Purchase Agreement.

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23. ER 6 simply requires a fully executed power purchase agreement at the time an AFC is filed (ER 6, p. 6-3, requirement 2).

24. PMR, p. 25 (emphasis in original).

C. Application of ER 5 Need Tests

On March 26, 1986, Applicant and Staff stipulated that demand conformance for the American 1 Project would be analyzed according to the criteria set forth under ER 5's "Unspecified Reserved Need" test. Acting upon a Committee recommendation, the Commission assigned the Project this test on April 30, 1986. Subsequently, the parties agreed that the provisions of the more difficult "System Displacement Need" test were appropriate (Sept. 29, 1986 RT 5, 7-8).

The record contains evidence on both tests.

1. Unspecified Reserved Need Test

To pass any of ER 5's need tests, a project proponent must demonstrate compliance with each pertinent condition. Staff offered the only evidence upon the "Unspecified Reserved Need" test. Its analysis concludes that, based upon the ER 5 assumptions and upon the availability of resources considered "likely to be available" through the 1996 forecast period, there was insufficient remaining total need[25] for energy in the PGandE service area to accommodate the American 1 Project. In Staff's view, this mandated the conclusion that the project failed condition 4a, and hence failed to meet the criteria set forth in the Unspecified Reserved Need test (Dec. 22, 1986 RT 164-82). Applicant did not rebut or discredit Staff's testimony.

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25. "Total need" can colloquially be considered the energy requirement remaining, after subtracting resources "likely to be available," to fill

Discussion. The Staff testimony did not analyze the American 1 Project based on the operating conditions set forth in the amendment to the Power Purchase Agreement. There is, however, no suggestion in the record which indicates such analysis would alter the conclusions reached. Since the Staff analysis constitutes the only (and unrebutted) evidence concerning the Unspecified Reserved Need test, the Commission accepts it as conclusive on the issue.

2. System Displacement Need Test

Under the progressive schematic of ER 5, the "System Displacement Need" test is the most difficult, allowing a facility to be certified only if it passes the five enumerated criteria. As mentioned earlier, the various ER 5 need tests are both derivative and additive, incorporating certain conditions common to one another and at the same time adding new conditions. The System Displacement Need test represents the culmination of this schematic.

The five component conditions, while grammatically separated, are conceptually integrated. The first three are derived directly from, and in fact are the same as, conditions contained in the Unspecified Reserved Need test. The fourth condition equates directly with condition 4b of the Specified Reserved Need test.[26] This general point, while repetitive, is

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a service area's needs or to achieve the one-third oil/gas displacement goal. See generally, Crockett "Presiding Member's Report," pp. 26-29.

significant due to various arguments concerning the proper interpretation of the test in this case. Staff had at least implicitly argued that the burden for passing a condition contained in the System Displacement Need test is more stringent than is required when that condition is contained in another of ER 5's tests.[27] Applicant challenged this interpretation, characterizing it as increasing the "hurdle heights" for a given condition.[28]

In the PMR, the Committee did not accept the Staff approach for two basic reasons. First, ER 5 contains no support for such interpretation. It is true that the System Displacement Need test is the most difficult of ER 5's tests. However, it is also true that of the test's five conditions, four are worded precisely the same as those appearing in more lenient need tests. Logically, had the Commission intended to increase the "hurdle heights" in these derivative conditions, it would have done so clearly. Moreover, this identity of conditions is consistent with the overall schematic of ER 5, which increases the difficulty and complexity of need tests by choosing among and adding conditions. Second, the Staff position would prevent Committees (or the Commission) from relying upon the body of prior Decisions issued under ER 5 for guidance in interpreting a particular need test for the first time. This result would be discordant, especially when precisely the same language is being interpreted. The Committee observed that, as to this general rule of interpretation, Staff sought to create a distinction where none exists and, were such position accepted, it would be exceedingly difficult to harmonize

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26. See footnote 12, supra.

27. See e.g., Staff "Reply Brief," (March 20, 1987), pp. 17-18.

28. Applicant's "Reply Brief" (March 25, 1987), p. 4.

the provisions of ER 5.[29] The Commission agrees.

In summary, the System Displacement Need test is indeed the most difficult of ER 5's tests, both because of the component conditions chosen and because of the addition of condition 5. The balance of this section applies these conditions in light of the precepts contained in ER 5 as they have evolved in recent siting cases as well as in light of the "Presiding Member's Report" on the Crockett AFC.[30] The results of this analysis, after consideration of the testimony and comments received at the June 11, 1987 Committee hearing, follow.

a. Condition 1 - For projects in which the risk of cost overruns is not borne by ratepayers, e.g. Qualifying Facilities under PURPA, power from the facility will be sold to a utility at or below the utility's avoided cost as determined by the applicable ratemaking body.[31]

Summary. This condition represented the single point of initial agreement between Staff and Applicant concerning the demand conformance analysis. Because the payments accruing to Applicant are no more than those allowed under an SO4 the power is, by definition, priced at PGandE's avoided cost as determined by the CPUC and therefore in compliance with condition 1 (Dec. 22, 1986 RT 206-10). The parties did not, however, attach the same

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29. PMR, p. 28.

30. Aside from the present Decision, the Crockett Report represents the sole attempt to apply the System Displacement Need test (Docket No. 84-AFC-3, June 23, 1986; Commission Pub. No. P800-86-005).

31. See ER 5, p. 91, 94; this condition also contains an alternative, applicable to utility owned facilities, which is herein irrelevant.

significance to this conclusion.

Essentially, Applicant argued that the avoided cost criterion, as approved by the CPUC and embodied in the Standard Offer contracts, must be interpreted to be "ratepayer indifferent" insofar as both energy and capacity payments are concerned.[32] Staff, on the other hand, argued a somewhat different interpretation. While acknowledging that the purpose of condition 1 is to "assure that there is a standard offer and to assure that the Public Utilities Commission's . . . standard offers are complied with and as such, by definition, would be ratepayer indifferent" (Dec. 22, 1986 RT 211:14-17; see also 211:18-24, 213:19-24 to 214:1-3), Staff nevertheless expressed strong reservations as to whether or not the ratepayer is in fact protected through this adopted pricing structure (Id., 213:6-18). Though Staff did not argue that the avoided cost criterion is illegal, it argued that the monetary values adopted in the various Standard Offers should be used to determine whether the proposed project provides significant economic benefits when compared to operating the utility system without the proposed project[33] (see, e.g., Feb. 24, 1987 RT 16-19, 22-27; "Staff Comments on the PMR", May 29, 1987, p.1).

Discussion. The "avoided cost" criterion derives from PURPA's "incremental cost" standard.[34] This valuation is "the cost to the electric utility of the electric energy which, but for the purchase from such

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32. See, e.g. Applicant's "Opening Brief," p. 30.

33. This point is also discussed under condition 5, infra.

34. See 16 U.S.C.A. § 824a-3(b).

cogenerator or small power producer, such utility would generate or purchase from another source."[35] It is the maximum rate at which QFs are to be compensated for power supplied to a utility.

The CPUC has primary responsibility for implementing the economic provisions of PURPA and for establishing permissible electricity rates for investor owned utilities such as PGandE. In adopting interim long-run Standard Offer contracts in 1983, the CPUC recognized concerns similar to those voiced by Staff. Acknowledging that the adoption of long-run Standard Offers would be "based on forecasts of escalating avoided costs when there is no current capacity shortage among California utilities,"[36] and that QF power should not "be developed at any cost,"[37] the CPUC nevertheless adopted Standard Offer energy and capacity payment provisions similar to those pertinent in the present case.

In taking this action, several items are especially noteworthy. First, the CPUC acknowledged that the actual value of avoided cost to the utility would vary over the contract period; the CPUC believed, however, the proper view to be "whether, over the course of a long-term contract, despite the periodic swings in actual avoided costs . . . the prices . . . keep the ratepayer economically indifferent to whether the generation was performed by the utility or a QF."[38] Second, the CPUC's Decision emphasized its commitment

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35. See 16 U.S.C.A. § 824a-3(d); 18 CFR § 292.101(b)(6); PURPA does not specify the length of the term for which such payments are to be made.

36. CPUC Decision 83-09-054 (September 7, 1983), p. 6.

37. Id., p. 7 (emphasis in original).

"to treating the prices paid under the standard [offer] as per se reasonable, to be passed on to ratepayers."[39] Third, while recognizing "there is no current capacity shortage among California utilities", the CPUC stated its long range goal was to avoid "ultimately risking a critical capacity shortage because...[of the failure to]...take reasonable steps to afford an opportunity for QF power, particularly long-term capacity, to be steadily developed."[40] The need for additional capacity at some point during the term (30 years) of these Standard Offer Contracts thus appears implicit in this CPUC action.[41]

Subsequently, the CPUC suspended interim long-run Standard Offers[42] but, on October 16, 1986, it extended the capacity price schedules previously adopted in 1983. Decision 86-10-038[43] expressly addressed, inter alia,

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38. Id., p. 6.

39. Id.; see also p. 47 therein.

40. Id., pp. 6-7.

41. This CPUC pricing determination was based upon negotiations among interested parties and does not, as correctly pointed out by Staff, predetermine the "need" for a project, but addresses only specified economic matters. The determination of "need" for a project is solely within the province of the Energy Commission (Pub. Resources Code, §§ 25500, et seq.).

42. On October 14, 1984 the CPUC temporarily suspended SO4, payment option 3 for PGandE service area QFs over 50 MW; it continued this suspension on December 5, 1984 and January 16, 1985. On April 17, 1985, the CPUC suspended SO4 for all QFs and all payment options. In suspending the availability of Interim Standard Offer 4 contracts, the CPUC acknowledged that "significant changes have occurred in the energy markets" (CPUC Decision 85-04-075, April 17, 1985, p. 15). After balancing a number of competing factors, and after recognizing that additional QF capacity would result in ratepayer burdens (Id., pp. 16-31), the CPUC sought to limit the addition of further capacity by suspending contract availability. This limitation did not pertain to the present Applicant, however, since it possessed an existing Standard Offer contract.

PGandE's contentions that the capacity payment schedule adopted in Decision 83-09-054 should be valid only through 1987 and that, thereafter, QFs should receive only a "'reasonable price at the time of delivery'" for firm capacity.[44] In declining to take this action, and in construing the rights of QFs holding signed Standard Offer contracts by extending the subject payment schedules, the CPUC stated "firm capacity QFs holding contracts under [SO4] are entitled to levelized payments for such capacity over the term of their contracts."[45] Moreover, the CPUC acknowledged PGandE's argument that the payment schedule extension "would increase costs to PGandE, and ultimately ratepayers."[46] In a later Decision, the CPUC clarified that the firm capacity valuation would extend through 1990.[47]

These actions by the "applicable ratemaking body" indicate that the CPUC considers energy and capacity pricing valuations contained in then-existing Standard Offer contracts as reasonable for ratemaking purposes. This is in concert with ER 5 and the purpose of condition 1 of the System Displacement Need test. The express purpose of this condition (which is common to all of ER 5's need tests) is to ensure power is "reasonably priced."[48] Although ER 5

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43. The CPUC reached this Decision after it suspended SO4, basing it largely on matters of equity.

44. CPUC Decision 86-10-038 (October 16, 1986), p. 7.

45. Id., p. 10.

46. Id., p. 12.

47. CPUC Decision 86-12-013 (December 3, 1986), p. 4, footnote 2.

48. ER 5, pp. 87, 89. In the Gilroy Decision (Docket No. 84-AFC-4, November 13, 1985, Commission Publication No. P800-85-011), page 32, the Commission found that "the real purpose of condition 3a [of the Specified Reserved Need test] is to ensure that ratepayers will benefit from a

discusses at length the reasons why the CPUC's avoided cost criterion may in reality create ratepayer disbenefits,[49] it does not definitively suggest that the CEC will consider these economic determinations to constitute unacceptable ratepayer impacts.[50] This situation does not, however, foreclose the Commission from determining the need for the project during the applicable forecast period, nor from examining whether the project provides an economic benefit under the System Displacement Need test.

b. Modeling Controversy

Summary. The analysis of Conditions 2 and 3 depends largely upon the results of computer modeling. Unfortunately, ER 5 contains insufficient guidance for developing a complete set of modeling assumptions. In an attempt to remedy this methodological problem, the parties initially agreed to use the ELFIN computer model, as well as input assumptions developed during the Crockett AFC proceeding. At the outset of the December 1986 hearings in the present case, the parties indicated that the difference in results achieved revolved primarily around the propriety of two modeling assumptions: nuclear maintenance scheduling; and return capacity of the transmission intertie with

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project." Condition 3a of the Specified test contains the precise language of condition 1 of the System Displacement test.

49. See ER 5, pp. 114-29. The CPUC has arguably also recognized this reality by limiting availability of SO4 contract terms to QFs possessing such executed contracts (see generally, CPUC Decision 87-01-049; January 29, 1987).

50. ER 6 addresses this difficulty with "unrealistic" avoided costs by suggesting a solution whereby future CPUC approved Standard Offers be developed jointly, and based in significant measure on economic assumptions addressing CEC concerns; see generally, ER 6, pp. 5-31 through 5-34; 6-1 through 6-7.

the Pacific Northwest[51] (Dec. 22, 1986 RT 155-56, 279). This representation was apparently based upon modeling the American 1 Project as a non-dispatchable "must run" facility. Both Applicant and Staff proferred evidence supporting their respective modeling results at the December 22 and 23 hearings.

Introduction of the proposed amendment to the power purchase agreement, however, necessitated that existing modeling results be revisited to account for the project's dispatchable features. At the February 1987 hearings, Staff explained its belief concerning ELFIN's analytic unreliability when considering a dispatchable facility (see, e.g. Feb. 23, 1987 RT 125, 130; Feb. 24, 1987 RT 81-83, 90-91, 105). Because of time constraints (Feb. 23, 1987 RT 131), it did not offer direct evidence supporting alternative modeling results, attempting instead to discredit Applicant's affirmative evidentiary showing.

Discussion. The record is replete with competent testimony discrediting the use of ELFIN due to its inherent unsuitability and methodological conservatisms favoring the Applicant. The record is also replete with equally competent testimony supporting the use of ELFIN and suggesting the accompanying methodological conservatisms disfavor the Applicant. What is lacking, however, is a credible evidentiary base to support reasoned analysis

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51. Interestingly, Staff testimony indicates both that "all models . . . are fundamentally wrong at some level" (Feb. 24, 1987 RT 91:7-8) and that use of one or another of the principal disputed assumptions would not necessarily lead to results comporting with actual system operations (Dec. 22, 1986 RT 288, Dec. 23, 1986 RT 27-28).

on other than ELFIN derived modeling results. While the Committee specifically did not endorse the use of the ELFIN model, it necessarily based its PMR analysis upon the ELFIN results since those results constitute the only direct evidence of record relevant to Conditions 2 and 3. The Commission accepts this analysis.

c. Condition 2 - The power from the facility matches the load conditions of the service area(s) in which the power is delivered.

Summary. The parties each analyzed the facility's previously proposed non-dispatchable operation under this condition (see generally, Dec. 22, 1986 RT 249-301; Dec. 23, 1986 RT 2-61; Exhibits 25, 26, 27). Applicant also submitted direct evidence concerning the degree of project "load match" under the terms of the Power Purchase Agreement amendment. This testimony establishes that, even adopting the disputed Staff assumptions alluded to in the foregoing section, the project would match the PGandE area load (by displacing oil and gas) through the forecast period as follows:[52]

Dispatchable Operation

Year	Percentage of Load Match
1989	91
1990	91
1991	99
1992	99
1993	99
1994	99
1995	99
1996	99

52. See, Feb. 23, 1987 RT 110-17; Exhibit 37.

Were maintenance and transmission return capacity assumptions favored by Applicant used, the percentages would increase to 99 percent in 1989 and 1990, as well as to at least 100 percent for the years 1993 and following (Feb. 23, 1987 RT 114-15; Exhibit 37).

Staff offered no independent verification, contending instead that ELFIN's inherent unsuitability rendered these results unreliable (Exhibit 38; Feb. 23, 1987 RT 119, 129).[53]

Discussion. Both parties seemingly agree that the primary purpose of condition 2 is to provide the system operator with a degree of control and flexibility concerning the operation of a proposed project. Indeed, this purpose is in concert with one of the principal tenets of ER 5 in preventing the addition of unneeded "must run" facilities in the PGandE area. While the record contains substantial discussion as to whether the American 1 facility should most properly be characterized as a "baseload," "intermediate," or hybrid facility, such discussions shed little light on the pivotal matter at hand - i.e., the extent of flexibility which the system operator can exert

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53. Under the Staff analysis, based on non-dispatchable core-profile operations, the load match percentages are:

Year	Percentage of Load Match
1989	83
1990	87
1991	91
1992	91
1993	91
1994	92
1995	93
1996	92

over the proposed project[54] and the extent to which power from the proposed project matches PGandE's load conditions.

When placed in proper perspective the American 1 Project, operating under the terms of the proposed power purchase amendment, is another step in ER 5's transition away from non-dispatchable facilities and toward the universally dispatchable facilities envisioned in ER 6.[55] It is more dispatchable than the most comparable facility (Gilroy) approved under ER 5 (Feb. 23, 1987 RT 153). It continues the evolution toward dispatchable operation cited with approval in previous ER 5 cases such as ARCO-Watson and Sycamore. While it is not completely dispatchable, no party has credibly contended that such need be the case to satisfy condition 2.

Applicant essentially argued that a "reasonable" degree of load match suffices.[56] Staff voiced a tentative objection to this argument, seemingly believing that a "reasonable" load match is relevant only in the context of the Specified Reserved Need test.[57] This argument, however, belies Staff's own testimony indicating that load match "approaching" 100 percent throughout

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54. ER 5 states at page 86:

> The demand conformance policy is also modified to take into account the fact that utilities now have less control over their resource plans since they must purchase power from QFs. This means that specific attention needs to be placed on the load duration curve of the utilities so that the appropriate type of power (base, intermediate, peaking) is sited.

55. See, e.g. ER 6, p. 6-6.

56. "Opening Brief," p. 11.

57. "Reply Brief," p. 17-18.

the forecast period is sufficient to demonstrate compliance with condition 2 (Dec. 23, 1986 RT 5; Feb. 24, 1987 RT 72). Moreover, the Staff interpretation would disrupt the integrated nature of ER 5's need tests. As explained above, "load match" is a criterion common to all these tests. While it is true that the phrase "reasonably matches load" appears only as language prefatory to the Specified test,[58] it is equally true that the precise language of the load match condition of the Specified test appears, derivatively, as condition 2 of the System Displacement Need test. Such repetition in the language of the conditions is presumably more than coincidental, and reinforces the interpretation expressed above that the latter test is more difficult due to the choice and addition of conditions, rather than an increase in "hurdle height."

Thus, the sole pertinent inquiry is whether Applicant has demonstrated sufficient load match to satisfy condition 2. Based upon the Applicant's modeling results, and in the absence of persuasive evidence to the contrary, the Commission can only conclude that the demonstrated degree of load match "approaches" 100 percent throughout the forecast period and is adequate to satisfy this condition.[59]

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58. ER 5, p. 89.

59. The following language is contained in the "Presiding Member's Report" on the Crockett AFC at pages 56-57: "The load matching condition is not an absolute standard requiring a facility to achieve 100 percent oil and gas displacement throughout the 12-year forecast period ...".

d. Condition 3 - To the extent a facility is based on oil or gas displacement, the Applicant must also demonstrate that the facility will, in fact, displace the amount of oil and gas in California with which it is proposed to be credited.

Summary. The analytical construct developed in the present case essentially equated the oil and gas displacement criterion with the load matching condition described above. Applicant's computer simulations indicated that the proposed project will displace PGandE oil and gas generation from 91 percent to 100 percent of the time during the forecast period (Exhibit 37). Staff took a different tack. It basically asserted that while load match (founded upon oil and gas generation displacement) can be less than 100 percent to satisfy the applicable criterion under condition 2, oil and gas displacement must nevertheless be at 100 percent to satisfy condition 3. Moreover, it asserted this position even though recognizing the Commission has viewed the criterion more flexibly (Feb. 23, 1987 RT 136, 143; see also Feb. 24, 1987 RT 70-72). Staff did, however, conclude that the proposed facility would satisfy condition 3 if ER 5 (and Applicant's) assumptions were used (Dec. 23, 1986 RT 17; Feb. 24, 1987 RT 70).

Discussion. As noted above, the propriety of modeling assumptions played a major role in the dispute concerning compliance with this condition. However, as in condition 2, Applicant produced the only quantifiable results concerning displacement of oil and gas generation under dispatchable operations.[60] Staff failed to discredit persuasively the validity of this

60. While Applicant argued that fuel (vis a vis generation) displacement is also a consideration relevant to condition 3 ("Opening Brief," p. 22), the Commission agrees with Staff that fuel displacement is more properly

modeling effort, stating merely that it could neither agree nor disagree with the proferred results (Feb. 23, 1987 RT 124-25). Given this failure to persuasively rebut the evidentiary showing by Applicant, as well as the acknowledgement that condition 3 is satisfied using ER 5 assumptions, the Commission must conclude Applicant has met its burden in establishing compliance with this condition.[61]

e. Conditions 4 and 5 - Perspective

Conditions 4 and 5 of the System Displacement Need test embody the Commission's statutory charter to evaluate the desirability of a new power plant based on a myriad of social, technical, environmental, and economic considerations (See Pub. Resources Code, §§ 25001, et seq.; ER 5, pp. 77-80). These considerations fall into four general categories: maintenance of a sound economy; protection of public health and safety; protection of the

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a "conservation of resources" issue under condition 4 (as well as condition 5), and that ER 5 focuses on generation displacement as the appropriate measure for condition 3 (see Dec. 22, 1986 RT 304-05; Staff "Reply Brief," pp. 23-24).

61. Staff initially changed its position as a result of using assumptions derived from the Crockett proceeding, characterizing language contained in the "Presiding Member's Report" as indicating that 100 percent or close to 100 percent oil/gas displacement throughout the forecast period is required to pass condition 3 (Dec. 22, 1986 RT 302). That Report, however, states condition 3 would be satisfied if displacement "drew closer to 100 percent" throughout the 1988-96 time period (page 77). To interpret the significance of this phrase properly, one must realize that the pertinent context was one in which displacement ranged from 56 to 88 percent in the 1990-95 time frame (Id., page 74). That range is far different from the 90 to 100 percent range discussed in the present case.

environment; and conservation of natural resources.[62] These categories are notable for their breadth and logically require the Commission to examine project attributes and detriments in the context of impacts to the State as a whole. While there is a degree of conceptual overlap to conditions 4 and 5, there is also a distinction. Condition 4 permits a balancing of project benefits versus project detriments (or lack of detriment) and a conclusion based upon this weighing; as such, it furthers ER 5's goal to ensure that only power plants beneficial from a statewide perspective are certified.

Condition 5 (which distinguishes the System Displacement Need test from all others) takes this concept one significant step further. While condition 4 allows, e.g. marked environmental benefits to, on balance, outweigh substantial economic costs, condition 5 clearly requires that a proposed

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62. ER 5, at pages 77-78, summarizes the subfactors relevant for balancing under condition 4:

    - o Maintenance of a Sound Economy: reducing ratepayer cost; ensuring reliable supply of electricity; resource diversification; promotion of alternative sources of energy; accommodating demand growth.
    - o Public Health and Safety: general protection against health and safety hazards, toxic wastes; safeguarding against risks from nuclear fuel and wastes.
    - o Environmental Concerns: preservation of environmental quality; consideration of land use and economic development plans; restricted siting in designated areas.
    - o Conservation of Resources: conservation; load management and efficiency standards.

project provide both significant economic and environmental benefits.[63] This condition creates a heavy burden of persuasion for project proponents more specific in point of reference than condition 4, a burden which the Commission deemed appropriate in light of the current abundance of electrical power.

In order to differentiate its analysis under these two conditions, the Committee's PMR viewed condition 4 as serving to "sort" benefits from detriments. In other need tests, balancing the results of this sorting process, and determining the existence or non-existence of an overall benefit, concludes the inquiry. In the System Displacement test context, however, a subtle difference exists. Whereas condition 4, by its very nature as a balancing test, must consider in toto the varied positive and negative aspects of a project, there is no correlative need for such inquiry under condition 5. Rather, the relevant inquiry is whether the benefits identified as positive are sufficient to be considered "significant."

The differing frames of reference for the two conditions validate this conceptual approach. Condition 4 references a balance of benefits and detriments based upon general criteria, each of which is a matter of broad

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63. Prefatory language to the System Displacement Need test (ER 5, p. 93) states: ". . . the facility will be found needed only if it also provides significant economic and environmental benefits." [emphasis added]. The Crockett "Presiding Member's Report" recognizes this stringency at page 79:

> System Displacement Condition 5 requires not only that the project provide an overall benefit, on balance, but specifically that the economic and environmental benefits must both be positive. Thus, whereas a project could pass Condition 4 by providing significant economic benefits and acceptable, though adverse, environmental impacts, such a project could not pass Condition 5.

concern. Hence benefits or detriments under this condition are necessarily diluted over a broad spectrum. Condition 5, conversely, is more discrete in its reference to "operating the [electrical generating] system without the proposed facility." This more specific focus essentially serves as a check upon the balance reached in condition 4, ensuring that benefits actually exist in both categories identified and that such benefits are indeed significant. This check is entirely appropriate since, under condition 4, benefits of a solely environmental nature could legitimately be construed to outweigh solely economic detriments, as could the reverse. This check is also necessary when one remembers that condition 5 appears only in the most stringent ER 5 need test, a test whose application is intended to ensure that only projects possessing a very high level of desirable attributes are licensed.

The PMR recognized this point had not been clear throughout the proceeding, as evidenced by the tendency of the parties to testify upon conditions 4 and 5 simultaneously. This interpretation, however, explains a workable analytical construct; evidence submitted by the parties, whether originally offered under condition 4 or condition 5, has been considered appropriately in formulating both the PMR and this Decision.

f. Condition 4 - The Facility provides an overall benefit on the basis of balancing the statutory criteria described in detail in Section 4.3 of the Electricity Report.

Summary. As described in succeeding sections of this Decision and, with the additional measures identified at the June 11, 1987 hearing, there is no dispute that all project impacts concerning protection of public health and

safety, as well as all project-related environmental impacts, are fully mitigated. As such, many of these factors are therefore analytically neutral in that while no detriment exists, neither does a benefit. This consequently narrows the number of factors to be balanced.

On the plus side of the equation, the evidence establishes that air quality emissions will be reduced below permissible levels and that appropriate additional measures discussed under condition 5 below will create a significant environmental benefit; incremental benefits may occur to aquatic resources; fuel will be used more efficiently and lead to an overall reduction in oil consumption; the project provides an efficient and dispatchable generation source; direct economic benefits will accrue to the local area as well as indirect benefits to various sectors of the California economy; and the project enjoys strong local support (see e.g. Dec. 22, 1986 RT 237-42; Dec. 23, 1986 RT 84-87; Feb. 24, 1987 RT 125; June 11, 1987 RT 71-93; Exhibits 25, 37; "Opening Brief," pp. 23-26; "Reply Brief," pp. 6-8).

Staff does not discredit these affirmative showings, and in fact now agrees that significant environmental enhancement will result (June 11, 1987 RT 88). The Staff's main arguments focus instead on the relative weight which should be accorded what it considers to be excessive economic ratepayer penalties (see, e.g. Dec. 22, 1986 RT 160; Feb. 23, 1987 RT 178-82; Feb. 24, 1987 RT 25-28; Exhibit 38; "Reply Brief," pp. 24-37; "Staff's Comments on the PMR", May 29, 1987, p. 5).

Discussion. In the interests of coalescing the following discussion, the Committee's PMR referred to Exhibit 25, Table 5-1 as it appears at page 24 of Applicant's March 6, 1987 "Opening Brief", and cited its specific agreements and disagreements therewith. This Decision follows a similar format.

The Committee agreed that the project will neither create a benefit nor disbenefit on the following factors: ratepayer cost reduction; contribution to promising new technologies; water quality; biological resources; and public health and safety. Any project-related benefits under these areas are so incremental or remote as to be insignificant.

Evidence presented at the subsequent June 11, 1987 hearing makes moot much of the PMR's discussion concerning balancing of project benefits and detriments under Condition 4. That evidence, as discussed further under condition 5, infra, unequivocally indicates that a significant net environmental benefit will occur due to the operation of the American 1 Project (June 11, 1987 RT 88). This circumstance, coupled with the Committee's unchallenged conclusions concerning the existence of at least some degree of benefit in the areas of load following capability, resource conservation, and fuel efficiency, combine to both bolster the positive factors identified in the PMR, and to obviate the need to repeat them here.[64]

In the PMR, the Committee considered ratepayer cost factors as "neutral" since its operative presumption was that "avoided cost" equated with

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64. The Committee's view of these additional factors is discussed at length at pages 46-48 of the PMR.

"ratepayer indifference." Staff's primary economic argument focused exclusively on ratepayer costs (Feb. 24, 1987 RT 40), suggesting that the level of the project's CPUC-approved capacity payments created a detriment so substantial that other benefits paled by comparison (Feb. 24, 1987 RT 27-29; 163-65). The Committee recognized the merit of the Staff position on this general matter, but nevertheless chose to accept the "ratepayer indifference" standard as expressed by the CPUC in its Decisions relevant to valuing capacity under the Standard Offer contracts. Staff questioned this approach in its comments on the PMR (see generally, June 11, 1987 RT 14-16).

Based upon comments submitted on the PMR, the single point of remaining disagreement appears to center on whether the Staff's showing concerning premature project completion and an accompanying sum of $40 million in added ratepayer burden should outweigh project benefits. As noted at page 46 of the PMR, while the evidence indicates the American 1 Project meets ER 5's physical/operational criteria, other testimony indicates that the PGandE system will not physically require additional capacity until at least 1991, some two years following project operation (Feb. 24, 1987 RT 28).[65] Applicant, however, has introduced unrefuted testimony that the project will sustain economic activity in the agricultural, food processing and related areas in general, as well as create a benefit to the socioeconomic structure of the King City area in particular. Moreover, representatives of the project

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65. The Commission has, under ER 5, evaluated demand conformity largely based upon the fifth and the twelfth year of the forecast period (see, e.g. Commission Decision on the Gilroy Generation Facility, Docket No. 84-AFC-4, p. 42). ER 6 recognizes this, and has adopted intermediate year forecasts to more precisely determine when new facilities are physically needed (see ER 6, p. 2-3).

locale have clearly expressed unreserved support. Within this frame of reference, the project would constitute a demonstrable economic benefit.

Thus, the general question becomes whether the combination of benefits alluded to above, on balance, are sufficient to outweigh perceived detriments. In other words, the specific question is whether the negative economic aspects should outweigh significant environmental benefits, as well as demonstrated economic benefits to the local area and sustained economic activity in the agricultural and related sectors.[66] Realizing that such judgments are inherently subjective, the Committee in its PMR struck the balance in the Applicant's favor, even before the environmental enhancements described under condition 5, below, were considered. The environmental improvements identified at the June 11 hearing further buttress the Committee's prior conclusion, and the Commission therefore concludes that the Project complies with condition 4.

g. Condition 5 - The facility provides significant economic and environmental benefits compared to operating the system without the proposed facility.

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66. The Commission's Decision on the Gilroy AFC cited enhancement of local economic activities, benefit to agricultural and related sectors, and strong local support as positive factors. Id., p. 43; see also "Presiding Member's Report" on the Crockett Cogeneration Project, pp. 97-98.

In light of the foregoing identification and balancing of benefits, the remaining inquiry is whether the identified positive factors are "significant" within the meaning of condition 5.

Economic Benefits. In commenting upon the PMR, both Staff and PGandE misinterpreted the Committee's treatment of economic issues. While arguably this may be due to ambiguities in the PMR, it may also be due to focusing on one narrow aspect in isolation, without digesting the document as a whole.[67] Nevertheless, the primary concern raised in comments on the PMR implies the Committee neglected to assess the economic costs to the ratepayer accruing as a result of the project against the level of costs which would accrue were the project not built.[68]

The Commission, as did the Committee, acknowledges that ratepayer costs will increase over the level which they perhaps would have otherwise been. This increase is acceptable in the present instance due to a variety of

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67. For example, PGandE commented that use of the "ratepayer indifference" standard by the Committee meant that "[a]ny project with a CPUC approved contract automatically passes the economic element of the Condition 5 test" ("Comments on Presiding Member's Report," May 29, 1987, p. 16). The approach taken by the Committee considered avoided cost pricing only as "neutral" and specifically not as "beneficial" for purposes of conditions 4 and 5 (see PMR, pp. 33, 50-51).

68. See generally, "Staff Comments on PMR", May 29, 1987, pp. 5-6; "PGandE Comments on PMR," May 29, 1987; June 11, 1987 RT 14-20). The record indicates that, when compared to SO4 provisions, energy payments under the proposed power purchase amendment would be approximately $4 million per year less (Feb. 23, 1987 RT 190). Staff, however, has testified that the project will result in approximately $119 million in excess capacity payments for the 1989-96 period (Feb. 24, 1987 RT 26-28). The magnitude of this disparity illustrates the reasoning behind Staff's position and the necessity for reexamining Standard Offer payments.

factors. First, capacity needs arise in the PGandE area within the ER 5 forecast period. Second, the dispatchable features of the American 1 Project will provide PGandE operational flexibility in intergrating the project into its system. Third, under the amended SO4 contract energy costs will be lower than CPUC-approved levels and Basic's facility will remain a PGandE customer. These aspects, especially the latter, serve to lessen potential ratepayer burdens. Fourth, and as described under Conditions 2 and 3, supra, the project will satisfactorily match utility loads and displace utility oil and gas useage. Presumably ER 5 would not contain these criteria were they not deemed beneficial to the State's utility system and, at least indirectly, to utility ratepayers. Finally, the CPUC has approved the pricing valuations and pricing levels herein considered. While this determination does not mean these levels are "beneficial" within the meaning of condition 5, they constitute a factor to be evaluated, along with non-ratepayer related factors, in determining a project's economic merits under condition 5.

The American 1 facility will add approximately $740,000 per year to the King City tax base and result in the addition of approximately 20 permanent jobs. Additionally, certification of the American 1 Project will contribute to the continuation of $80 million of annual activity within the California economy. The primary evidence on this point delineates the multi-layered activity which currently flows from Applicant's existing food processing operations and the range of interests which are affected (Exhibits 25, 37).

Based upon the facts as currently established, the Commission can look to the local area and industry-related economic benefits to assess the existence

of economic benefit. In this context, the choice seems to be between evaluating the relatively concentrated adverse economic impacts upon a rather discrete area which would occur without the project,[69] against adverse economic impacts distributed over a much larger (PGandE ratepayer) base.

Given the facts as developed during this proceeding, the Commission's judgment is that the combination of the established economic factors indicates that net economic benefits will occur due to project operations. While the Commission would have preferred a wider range of economic benefits (for example, substantial ratepayer benefit) be attributable to the proposed project, it is nevertheless persuaded that the Applicant has demonstrated the existence of sufficient benefit within the decisional principles contained in ER 5. Therefore, the Commission concludes that the proposed project provides a significant economic benefit within the meaning of condition 5.[70]

Environmental. In the PMR (at pages 51-55), the Committee concluded that the proposed project did not provide a significant environmental benefit when compared to operating the utility system without the project. The Committee concluded that the American 1 Project did not meet Condition 5 of the System Displacement Need test and, therefore, did not recommend the Commission

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69. This is especially true in the present case since 30 percent of the King City tax base is dependent upon Basic Foods. The degree of this dependence therefore distinguishes the American 1 project from others, and makes this consideration weigh more heavily than would necessarily otherwise be the case.

70. This result would much less likely have been achieved under ER 6, which de-emphasizes local benefits and stresses benefits occurring on a statewide or service area basis (see ER 6, pp. 6-5, L-13 to L-14).

certify the facility. The Committee did, however, extend Applicant the option of moving to reopen the evidentiary record and propose additional means of establishing the required showing of benefit. Applicant moved to reopen the record in conjunction with its May 29, 1987 comments on the PMR. Accordingly, the Committee indicated it would entertain evidentiary presentations on Applicant's proposals at the June 11 hearing.

At that hearing, Staff expressed reservations concerning various items which Applicant proposed, and offered alternative constructive suggestions for consideration (see, e.g. Exhibit 44). The fundamental difference concerned the nexus of the items proposed as environmental enhancements by Applicant to the major environmental problem (lack of completely offset local emissions) characterized in the PMR. After informal discussions between Applicant and Staff, both parties agreed that the measures required as Conditions of Certification in the Demand Conformance and Air Quality portions of this Decision will, in combination, result in a significant net environmental benefit when compared to operating the utility system without the proposed project (see generally, June 11, 1987 RT 70-90). These measures both directly address the primary environmental concerns raised by the Committee and are directly related to the project. Moreover, these measures will produce a significant level of actual, quantifiable environmental enhancement attributable to project operations. In summary, they are:

- o NO_x reduction. As considered in the PMR, the American 1 Project would have emitted NO_x at the rate of 15 ppmvd, or approximately 216 tons per year. This level was within that permitted by local district rules. In order to assist in establishing the existence of an environmental benefit, however, Applicant will, as stated in the "Air Quality" Conditions of this Decision, infra, be required to limit project NO_x emissions to 9 ppmvd. This is a reduction of

approximately 40 percent below allowable levels, and will result in only 130 tons per year (rather than 216) being emmitted by the project (see generally, June 11, 1987 RT 72-74, 82, 96).

- o In order to additionally offset project air quality impacts, Applicant will provide King City $300,000 to fund a methanol (flexible fuel) or other alternative low-emission fuel conversion program for City vehicles. The bulk of these funds will be dedicated to actual vehicle purchase or conversion (Id. at 76). While the air quality benefit from this measure has not been specifically quantified, such benefit is known to exist and, perhaps more importantly, constitutes a concrete implementation of one of the Commission's paramount policy goals intended to improve environmental quality.

- o Applicant shall also provide King City funding of up to $35,000 to replace an existing gasoline storage tank which is leaking and free of air pollution control devices. The new tank will be fitted with state-of-the-art air pollution controls and a vapor recovery system. This measure will reduce hydrocarbon and associated emissions somewhat, as well as eliminate water quality degradation due to the leakage. It will also provide a benefit to the City (Id. at 76, 83).

- o Finally, Applicant shall continue to pursue the availability of additional emissions offsets, as required in the "Air Quality" Conditions of Certification. Should this pursuit prove futile in light of the apparent dearth of locally available offsets (see, e.g. Exhibits 42, 43), the Applicant shall provide up to $100,000 in funding for additional environmental enhancement, such as a riparian habitat preserve (see also June 11, 1987 RT 78-79, 86-87, 89-90).

The parties agree that these measures combine to satisfy the requirements of condition 5. The Commission concurs, and believes the Staff and Applicant have put forth truly commendable and creative efforts in assuring a noteworthy level of environmental enhancement which would not otherwise occur but for operation of the Project. Due to the level of this benefit, and in light of the lack of environmental detriment described elsewhere in this Decision, the Commission concludes the American 1 Cogeneration Project has satisfied this element of condition 5.

FINDINGS

Based upon the evidence of record, the Commission finds:

1. Applicant possesses an executed Interim Standard Offer 4 power sales contract.

2. Applicant possesses a fully executed amendment to its existing Standard Offer 4 contract, as contained in Appendix B of this Decision.

3. The California Public Utilities Commission has approved the energy and capacity prices contained in the Standard Offer 4 contract possessed by Applicant, and has characterized them as "ratepayer indifferent."

4. The characterization referred to in Finding 3 above does not foreclose Energy Commission inquiry into the "need" for a proposed project under the applicable test enunciated in the 1985 Electricity Report (ER 5).

5. The capacity payments the Applicant would receive under the amendment to the Power Purchase Agreement are currently the same as those to which it is entitled under Standard Offer 4.

6. The energy payments which it would receive under the amendment to the Power Purchase Agreement would result in ratepayer savings compared to operating the system without the proposed project.

7. Capacity pricing under the amended Power Purchase Agreement does not result in a ratepayer benefit.

8. The evidence of record demonstrates the Applicant does not meet the criteria of the Unspecified Reserved Need test as contained in the 1985 Electricity Report.

9. The Applicant stipulated to Demand Conformance evaluation of the American 1 Cogeneration Project under the System Displacement Need test as contained in the 1985 Electricity Report.

10. The American 1 Cogeneration Project complies with Condition 1 of the System Displacement Need test.

11. The American 1 Cogeneration Project complies with Condition 2 of the System Displacement Need test.

12. The American 1 Cogeneration Project complies with Condition 3 of the System Displacement Need test.

13. The American 1 Cogeneration Project complies with Condition 4 of the System Displacement Need test.

14. To comply with Condition 5 of the System Displacement Need test, a project must provide both significant economic and significant environmental benefits.

15. The proposed project will provide economic benefits to the local area and to the agricultural and related sectors.

16. The combination of economic benefits referred to in Findings numbered 6 and 15, above, constitute a "significant" economic benefit within the meaning of Condition 5 of the System Displacement Need test.

17. The proposed project will provide environmental benefits in the areas of resource conservation and air quality, as well as potentially in the area of biological resources.

18. Implementation of the methanol (flexible-fuel or other low-emission fuel) conversion program discussed in this Decision will further Commission policies and result in environmental benefit.

19. The environmental benefits referred to in Findings numbered 17 and 18 above are directly related to the American 1 Project.

20. The environmental benefits referred to in Findings numbered 17 and 18 above would not occur without operation of the American 1 Project.

21. The environmental benefits referred to in Findings numbered 17 and 18 above are sufficient to constitute a "significant" environmental benefit within the meaning of Condition 5 of the System Displacement Need test.

22. The American 1 Cogeneration Project complies with Condition 5 of the System Displacement Need Test.

23. The American 1 Cogeneration Project satisfies the "Demand Conformance" criteria set forth in the Fifth Electricity Report's System Displacement Need test.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall provide King City $300,000.00 for a methanol (flexible-fuel) or alternate low-emission fuel fleet program. The program shall consist of: 1) a study to determine the best methods to implement a program and the technical and engineering requirements of the program, and actions to provide cost competitive fuel to the fleet; 2) the purchase of a methanol (flexible-fuel) or alternate low-emission fuel fire truck; 3) the purchase of methanol (flexible-fuel) or alternative low-emission fuel vehicles or conversion of existing City vehicles to such fuel(s), and other such items related to implementing the program.

Verification: Ninety days after certification of the American 1 facility Basic shall provide the CEC Staff with 3 copies of the contract agreements with King City implementing this Condition. Basic, for the first three years after certification, shall provide semi-annual reports to the CEC staff, commencing 180 days following certification, on the status of the fleet program. If for any reason King City does not enter into a contractual agreement for the fleet program or fails to implement the program within a reasonable amount of time, Basic and the CEC staff shall bring the matter before the CEC's Siting and Regulatory Procedures Committee for consideration of an equivalent alternative.

2. Basic shall provide funding of up to $35,000.00 to King City to cover the cost of replacing the City's existing corporation yard underground gasoline storage tank. The storage tank shall be compatible with methanol or alternative low-emission fuel if feasible, and shall include state-of-the-art air pollution controls with a vapor control system that will return vapor to delivery tankers during filling and a vapor pressurization and/or collection system.

   Verification: Ninety days after certification of the American 1 facility, Basic shall provide the CEC staff with 3 copies of the contract agreements with King City implementing this Condition. If for any reason King City does not enter into a contractual agreement for storage tank replacement, Basic and the CEC staff shall within a reasonable amount of time bring the matter before the CEC's Siting and Regulatory Procedures Committee for consideration of an equivalent alternative.

3. If, after one year from the date of certification, Basic has not acquired any additional offsets (excluding UDCs) beyond those acquired by June 11, 1987 as required by Monterey Bay Unified Air Pollution Control District (MBUAPCD) Determination of Compliance (DOC) Condition 28 (CEC Air Quality Condition 37), Basic shall implement or provide funding not to exceed $100,000.00 for an alternative benefits proposal. Basic shall give first consideration to funding a riparian habitat preserve.

   Verification: No later than one year (365 days) after certification of the American 1 facility Basic shall provide the CEC staff with evidence that additional offsets (excluding UDCs) have been obtained. In the event Basic does not have such evidence one year after certification Basic shall, within 60 days after such one year period, present an alternative benefits proposal to the CEC staff which shall include a description of an alternative benefits proposal (such as the purchase of riparian lands to be set aside in perpetuity), the anticipated benefits, a proposed schedule for implementation, and a justification for the alternative benefits selection. The CEC staff shall respond to such alternative proposal within 60 days. If the Staff and Applicant cannot, after reasonable effort, agree to such alternative proposal, the Staff shall bring the matter to the Siting and Regulatory Procedures Committee for consideration.

PART THREE: ENGINEERING ANALYSIS

Public Resources Code section 25525 requires the Commission to review the design, construction and operation of the proposed project to determine whether it is in conformity with applicable law. Public Resources Code section 25523 empowers the Commission to require design and operational modifications to ensure the facility's safe and reliable operation.

The following subparts summarize the engineering disciplines examined, and contain Conditions of Certification governing the technical design, construction, and operation of the American 1 Cogeneration Project.

A. Cogeneration Criteria

This review addresses whether the proposed project qualifies as a cogeneration facility, conforming to the applicable statutory criteria, and whether the project will meet Applicant's performance objectives and criteria.

Public Resources Code section 25134 contains a threshold definitional requirement for a project seeking to qualify as a "cogeneration" facility:

> Cogeneration means the sequential use of energy for the production of electrical and useful thermal energy. The sequence can be thermal use followed by power production (bottoming cycle) or the reverse (topping cycle), subject to the following standards:
>
> (a) At least 5 percent of the cogeneration project's total annual energy output shall be in the form of useful thermal energy.
>
> (b) Where useful thermal energy follows power production, the useful annual power output plus one-

half the useful annual thermal energy output equals not less than 42.5 percent of any natural gas and oil energy input.

"Cogeneration" is also defined under Federal law. At 16 USC 796(18), the Public Utility Regulatory Policies Act (PURPA) authorizes the Federal Energy Regulatory Commission (FERC) to establish requirements for a "qualifying cogeneration facility". The applicable FERC rule is at Title 18, Code of Federal Regulations, section 292.205:

(a) Operating and Efficiency Standards

(1) Operating Standard

For any topping-cycle cogeneration facility, [71] the useful thermal energy output of the facility must during any calendar year period be no less than 5 percent of the total energy output.[72]

(2) Efficiency Standard

(i) For any topping-cycle cogeneration facility for which any of the energy input is natural gas or oil and the installation of which began on or after March 13, 1980, the useful power output of the facility plus one-half the useful thermal output, during any calendar year period must:

(A) Subject to paragraph (a)(2)(i)(b) of this section, be no less than 42.5 percent of the total energy input of natural gas or oil to the facility,[73]

(B) If the useful thermal energy output is less than 15 percent of the total energy output of the facility, be no less than 45

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71. Title 18 of the Code of Federal Regulations (CFR) Section 292.202 defines a topping-cycle cogeneration facility as a cogeneration facility in which the energy input to the facility is first used to produce useful power output and the reject heat from power production is then used to provide thermal energy. American 1 is a topping cycle project.

72. This criterion (1) is identical to PRC Section 25134(a).

73. This criterion (A) is identical to PRC Section 25134(b).

percent of the total energy input of natural gas and oil to the facility."[74]

A project complying with the Federal definition of "cogeneration" thus also meets the state standard set forth in Public Resources Code section 25134.

The proposed project will use natural gas as the primary fuel and fuel oil as secondary or back-up fuel for the sequential production of electrical and thermal energy.[75] The evidence initially offered on this topic area analyzed project operations during "core profile" for the first 10 years of operation, and then as a baseload facility for the remainder of the plant life (Dec. 3, 1986 RT 118, 135). Under these conditions, the project would result in an operating standard ranging from 15.6 percent (baseload) to 25.2 percent (core profile). The performance efficiency standard would range from 48.3 percent (baseload) to 49.3 percent (core profile) (Dec. 3, 1986 RT 118-119, 144-145). Operations under both these scenarios exceed the statutorily required annual 5 percent operating standard and the 42.5/45 percent efficiency standard. The project would have an overall efficiency of 52.3 percent during baseload operation, and 56.4 percent during core profile operation (Dec. 3, 1986 RT 144-145).[76]

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74. This criterion (B) requires 45 percent efficiency whereas PRC Section 25134(b) requires only 42.5 percent as long as the operating standard of 5 percent is met.

75. Basic Foods has committed to use the steam from the facility in its food processing operation (Dec. 3, 1986 RT 125), and will provide the steam sales contract when finalized (Dec. 3, 1986 RT 129).

76. The Commission notes Applicant contended a slightly higher overall efficiency of 57.1 percent during core profile operation.

Due to operational changes inherent in the December 30, 1986 proposed amendment to the Power Purchase Agreement (Exhibit 34), the Committee required the parties to reanalyze project conformity with the statutory cogeneration criteria. This subsequent testimony indicates that, under conditions prescribed, the annual operating standard would range as follows: 16.7 percent (modified baseload); 19.2 percent (maximum cycling); and 25.1 percent (modified core). The annual efficiency standard ranges would be: 48.4 percent (modified baseload); 48.0 percent (maximum cycling); and 49.1 percent (modified core).[77] Overall plant efficiency would range from 52.8 percent (modified baseload), to 53.1 percent (maximum cycling), to 56.1 percent (modified core) (Feb. 23, 1987 RT 20). Under the final Power Purchase Agreement amendment (Appendix B of this Decision), the project would continue to exceed both the statutory annual operating standard of 5 percent and the annual efficiency standard of 42.5/45 percent, as well as provide an overall project efficiency comparable to other similar projects certified by the Commission (Feb. 23, 1986 RT 19, 38-39).

Implementation of the Conditions of Certification, reflecting operation under the Power Purchase Agreement amendment, will assure the proposed facility will operate in compliance with the applicable laws and regulations on an annual basis (Feb. 23, 1987 RT 21). As noted at page 62 of the PMR, the Applicant was permitted to elect certain reporting requirements pertinent to Condition 1, below. It chose requirements "o" through "u" as set forth in the PMR; the verification to Condition 1 reflects this choice (see June 11, 1987 RT 6-7).

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77. "Baseload", "core profile" and "maximum cycling" operations are discussed in the "Demand Conformance" portion of this Report, supra.

FINDINGS

Based upon the evidence of record, the Commission finds:

1. The American 1 Project exceeds the applicable federal and state cogeneration standards, on an annual basis, when operating pursuant to the terms of the amendment to the Power Purchase Agreement (Appendix B of this Decision).

2. The American 1 Project is comparable, in terms of compliance with applicable operating and efficiency standards as well as in terms of overall project efficiency, to other similar projects certified by the Commission.

CONDITIONS OF CERTIFICATION

1. Over the lifetime of the project, Basic American Foods (Basic) shall operate the facility as a cogeneration system in accordance with the definition of cogeneration contained in PRC Section 25134(a)(b) and Title 18 CFR, Sections 292.205(a)(1) and (a)(2)(i)(B).

   Verification: Basic shall file with the California Energy Commission (CEC) during each calendar year an annual report in which monthly average values of the following plant operating parameters will be given:

   a. Monthly fuel use (includes quantity and Btu value) as evidenced by an invoice from the gas supplier

   b. Monthly electrical sales (includes kWh) as evidenced by an invoice to Pacific Gas and Electric Company

   c. Monthly steam sales (includes quantity and Btu value) as evidenced by an invoice (or equivalent) to Basic American Foods

   d. If the rate of items a, b, or c above, differs by more than ± 5, ± 15, and ± 10 percent, respectively, from rated conditions (reflected in Tables 1 and 2, Feb. 23, 1987 RT 25, 26), Basic shall provide an explanation of such anomaly(ies)

   e. Feedwater rate (lb/hr) and temperature (°F)

   f. Condensate return rate (lbs/hr) and temperature (°F)

   g. Process steam from auxiliary boilers (lb/hr) and temperature, pressure, enthalpy; auxiliary boilers' operating hours.

   This report shall also provide information for each month on any partial or total power and/or process steam production curtailment, including duration of curtailment and reasons for curtailment. The report shall be certified by the plant manager.

2. For Case 1B - modified core profile operation with hypothetical maximum cycling, no changes in the plant baseline design or physical configuration or method of operation as defined in the AFC (Basic 1986d, Table 5-9.1; see also Feb. 23, 1987 RT 25) shall be made without CEC staff concurrence if those changes could result in any one or any combination of the following operating conditions:

   a. For the 5 percent criterion per PRC Section 25134(a), 18 CFR Section 292.205, the annual thermal energy output (A) from the facility falls below the state and federal standards' mandated minimum useful energy of 109.2×10^9 Btu/year, or

   b. For the 45.0 percent criterion per 18 CFR Section 292.205, the annual average net electrical energy output (B) would be less than 2.074×10^{12} Btu/year at 100 percent capacity (5232 hr/yr) and the annual average thermal energy output (A) is less than 0.203×10^{12} Btu/year and the annual average fuel energy input (C) is greater than 4.836×10^{12} Btu/year. At this point the proposed cogeneration facility would have an efficiency of:

$$\frac{0.5 \times A+B}{C} = \frac{0.5 \times 0.203 \times 10^{12} + 2.074 \times 10^{12}}{4.836 \times 10^{12}} = 0.450$$

   c. The Operating Standard is less than 15.7 percent or greater than 22.7 percent. The Efficiency Standard is less than 42.5 percent or greater than 53.5 percent.

Basic shall not issue any purchase orders for equipment or engineering services which would reduce the Operating and Efficiency Standards and overall project efficiency of the proposed project certified in the Commission Decision, unless the CEC's concurrence has been obtained under the Compliance Dispute Resolution Procedure.

Verification: Basic shall submit to the CEC staff any changes (including but not limited to calculations, drawings, text, figures, tables) to the baseline design and operating characteristics described in the AFC (Basic 1985) and its amendments and/or the Commission Decision, when the proposed changes result in a change in plant performance beyond the limits defined in the above Condition.

3. For Case 2 - modified baseload operation, no changes in the plant baseline design or physical configuration or method of operation described for baseload operation in the December 30, 1986 Amendment to the AFC (Basic 1985, Table 5.9-2; see also Exhibit 34 and Feb. 23, 1987 RT 27) shall be made without CEC staff concurrence if those changes could result in any one or any combination of the following operating conditions:

   a. For the 5 percent criterion per PRC Section 25134(a), 18 CFR Section 292.205, the annual thermal energy output from the facility falls below the state and federal standards' mandated minimum useful energy of 180.0×10^9 Btu/year, or

b. For the 45.0 percent criterion per 18 CFR Section 292.205, the annual average net electrical energy output (B) would be less than 3.420×10^{12} Btu/year at 100 percent capacity (8760 hr/yr) and the annual average thermal energy output (A) is less than 0.151×10^{12} Btu/year and the annual average fuel energy input (C) is greater than 7.772×10^{12} Btu/year. At this point the proposed cogeneration facility would have an efficiency of:

$$\frac{0.5 \times A + B}{C} = \frac{0.5 \times 0.151 \times 10^{12} + 3.420 \times 10^{12}}{7.772 \times 10^{12}} = 0.450$$

c. The Operating Standard is less than 13.5 percent or greater than 19.9 percent. The Efficiency Standard is less than 42.5 percent or greater than 54.3 percent.

Basic shall not issue any purchase orders for equipment or engineering services which would reduce the Operating and Efficiency Standards and overall project efficiency of the project certified in the Commission Decision, unless the CEC's concurrence has been obtained under the Compliance Dispute Resolution Procedure.

Verification: Basic shall submit to the CEC staff any changes (including but not limited to calculations, drawings, text, figures, tables, etc.) to the baseline design and operating characteristics described in the AFC (Basic 1985) or the Commission Decision, when the proposed changes result in a change in plant performance beyond the limits defined in the above Condition.

4. After the initial combustion turbine startup, Basic shall remove or render the existing direct-fired air heaters permanently inoperative.

Verification: Not later than 30 days after the existing direct-fired air heaters are removed or rendered permanently inoperative, Basic shall submit a statement to the CEC as evidence that this Condition has been fulfilled.

B. Civil Engineering

Civil engineering review assesses whether the design criteria, performance objectives, soil properties, and construction methods are sufficiently defined and documented to reasonably assure compliance with applicable laws, ordinances, regulations, and standards. Civil site work on the proposed project will consist of site preparation and construction of drainage systems, sanitary sewer systems, access roads, and secondary containment systems.

Site preparation will require the excavation of about 15,000 cubic yards of soil which will be replaced with structural backfill at areas where structure foundations, roads, tanks, buried piping and conduits, and fences are to be constructed. The excavated topsoil will be used to landscape the west side of the plant site, and non-structural backfill will be used to cover areas left bare after construction; up to 20,000 cubic yards of fill material may be brought to the site (Nov. 5, 1986 RT 15, 33).

During construction, site drainage will be routed to an existing sump pond located at the northwest corner of the site; this pond has adequate capacity for sediments expected from project construction. During operation of the proposed project, drainage will be routed to a permanent retention pond designed to retain drainage from a 10-year, 24-hour storm and to control runoff velocities from a 100-year, 24-hour storm. Oil-water separators will be installed to remove oil and grease contamination (Nov. 5, 1986 RT 15-16, 33-34).

While site access roads will be used primarily by passenger vehicles, one to two 3-axle trucks per week are anticipated. The access roads, culverts, and pipes will be designed to support heavy vehicles carrying heavy equipment (Nov. 5, 1986 RT 16, 33).

Several secondary containment facilities will be constructed to contain accidental spills of hazardous liquids or oils. The 238,000 gallon fuel oil storage tank will be surrounded by a 6-foot high clay-lined earthen dike with a capacity of 110 percent (262,000 gallons) of the tank volume. Sulfuric acid, sodium hydroxide, sodium hypochlorite, and neutralizing tanks will be located in open concrete boxes coated with acid-resistant materials. Loading connections will be located within the perimeter walls to contains spills during loading. The main and auxiliary transformers will occupy gravel containment pits sized to contain 110 percent of the coolant volume plus precipitation from a 50-year storm (Nov. 5 RT 16-17, 34-35.).

Staff independently verified the Applicant's civil engineering criteria, concluding such criteria were acceptable for design purposes. Final design review, however, must occur post-certification in order to verify compliance with the applicable laws, ordinances, regulations, and standards (Nov. 5, 1986 RT 43; Exhibit 4).

FINDINGS

Based on the evidence of record, the Commission finds:

1. The proposed Civil Engineering practices and mitigation measures are adequate for design purposes.

2. Further monitoring of Civil Engineering activities will occur during the project's post-certification phase.

3. With implementation of the Conditions and Compliance Verifications, it is likely that the American 1 Cogeneration Project will conform with the applicable standards, ordinances, and laws identified in the "Civil Engineering" portion of Appendix A of this Decision.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall assign to the project a qualified civil engineer, registered in California, who shall:

   - o Be directly responsible for the design of secondary containment facilities, the proposed earthwork and related civil works facilities including, but not limited to, drains, ditches, and buried facilities.

   - o Prepare and sign (or directly supervise the preparation of) plans, calculations and specifications for grading, erosion and sediment control and related civil works for plant-site facilities, to comply with the AFC (Exhibit 1; sections 4.2, 10.7, and Appendixes C and D) and Exhibits 4 and 22 (responses to Staff's data requests Nos. 30 through 34, 91, 92, and 135).

   - o Be responsible for all earthwork and related civil work conforming with approved plans and specifications. (Business and Professions Code, Chapter 7, Division 3; UBC 1985 Edition, Chapters 29 and 70; King City Ordinance 470).

   Verification: At least ten (10) days prior to the submittal of the proposed plans, specifications and calculations for grading, erosion and sediment control and related civil works, Basic shall submit to the California Energy Commission (CEC) staff and the CBO* the name, qualifications, and registration number of the responsible civil engineer. Personnel changes shall be noted and subsequent data submitted in the following monthly construction (progress) report.

2. Basic shall assign to the project a qualified civil engineer, registered in California and fully competent and proficient in soil mechanics, who shall:

   - o Prepare the soils engineering reports required by the UBC Chapter 70.

   - o Be present, as required, during site grading and earthwork to provide consultation and to monitor compliance with the requirements set forth in Appendixes C and D to the AFC (Exhibit 1) and the 1985 Edition of the UBC Chapter 70.

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* CBO is the city or county Chief Building Official, or other designated authority, or a CEC duly authorized representative.

- o Recommend field changes to the responsible civil and construction engineers.

- o Prepare soils grading report (a "final report") as required by UBC Chapter 70.

This civil engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform with predicted conditions used as a basis for design of earthwork or foundations. (Business and Professions Code, Chapter 7, Division 3; UBC 1985 Edition, Chapters 29 and 70; King City Ordinance 470; CAC, Title 8, Sections 340 and 341; Rule 145, California Board of Professional Engineers).

Verification: At least ten (10) days prior to the start of site preparation, Basic shall submit the name, qualifications and registration number of this civil engineer to the CBO and CEC staff. If the civil engineer is subsequently reassigned or replaced, Basic shall submit the information required above for the newly-assigned individual in the following monthly construction report.

3. Prior to the start of site grading, Basic shall submit to the CBO for review and approval:

   - o Five (5) sets of the proposed Grading Plan combined with the Erosion and Sediment Control Plan (combined grading plan), and three sets each of the specifications and calculations signed by the responsible civil engineer.

   - o A Soils Engineering Report and Engineering Geology Report.

   - o A statement signed by the responsible design engineer that the proposed combined grading plan, drainage structures, specifications and calculations comply with the applicable laws, ordinances, regulations, and standards (LORS) and with the criteria and requirements set forth in the Commission Decision.

   - o Basic shall send a copy of the transmittal letter to the CEC detailing compliance with the foregoing requirements. (UBC 1985 Edition, Chapter 70, Excavation and Grading; CAC Title 8, Chapter 340 and 341).

   Verification: At least 90 days prior to the start of site grading, Basic shall submit to the CBO the above described documents. When the work described in the combined grading plan conforms with all applicable requirements, Basic shall obtain from the CBO one complete set of the submitted plans, stamped and signed with the CBO's approval and Basic shall submit written notice to the CEC staff that the documents conform to said requirements and have been approved.

4. Basic shall make payments to the CBO equivalent to the fees listed in Chapter 70, Section 7007(a) and (b), Table No. 70-A and 70-B of the Uniform Building Code for the plan review and permit. If the city or county in which the plant is to be constructed has adjusted the UBC fees

by city or county codes or ordinances, Basic shall pay the adjusted fees (UBC Chapter 70, Section 7007(a) and (b), Table No. 70-A and 70-B).

Verification: Basic shall make payments to the CBO at the time of submittal of the plans, calculations and specifications and the soils report. Basic shall send a copy of the transmittal letter to the CEC.

5. Basic shall keep the CBO and the CEC staff informed of the plant site construction progress. (Warren-Alquist Act, Pub. Resources Code, § 25532).

   Verification: Basic shall prepare and submit, on a monthly basis, the construction progress reports to the CEC staff and the CBO.

6. All plant site grading operations shall be subject to inspection by the CBO and CEC staff. (CAC, Title 8, Chapter 4, Division of Industrial Safety; UBC 1985 Edition, Chapters 29 and 70; King City Ordinance No. 470.)

   Verification: If any inspector finds that the work is not being done in accordance with the approved plans, the discrepancies shall be reported immediately to Basic's responsible civil engineer, the CBO, and the CEC staff. If the CBO delegates the inspection to Basic, Basic's inspectors shall file a monthly report of their inspections with the CBO and the CEC staff.

7. During and after completion of the plant site engineered grading (grading in excess of 5,000 cubic yards) as per UBC Sec. 7014 (b) and (c), Basic's soils engineer and engineering geologist shall prepare and submit all necessary reports, compaction data, and recommendations to the responsible construction engineer and to the CBO. (1985 UBC Chapter 70, Sec. 7014 (b) and (c).)

   Verification: Basic shall notify the CEC staff in the following monthly construction report when the documents are submitted to the CBO. Basic shall seek approval of all such submittals from the CBO. Basic shall submit to the CEC staff a copy of the CBO's approvals and comments.

8. Basic's responsible civil engineer for plant site activities shall (when the Engineering Geologist identifies unforeseen adverse geologic conditions) stop all earthwork and construction in the affected area (unless safety requires continuing work). Basic shall prepare and submit modified plans, specifications, and calculations to the CBO. (CAC, Title 8, Chapter 4, Division of Industrial Safety; UBC 1985 Edition, Chapters 29 and 70).

   Verification: Within 10 days after receipt of the design changes the CBO, in consultation with the CEC staff, shall approve or disapprove the changes. Upon approval of the revised design, the CBO shall authorize Basic to resume earthwork and construction in the affected area and provide a copy of such approval to the CEC staff.

9. After completion of rough grading, Basic's responsible civil engineer shall submit the following documents to the CBO:

- o The soils grading and geologic grading reports;
- o As-graded grading plan;
- o A summary of the soil compaction tests;
- o Signed statements by the responsible construction engineer that the work was done in accordance with the final approved combined grading plan, and by both the soils engineer and engineering geologist that the site is adequate for its intended use (UBC 1985, Chapter 70).

Verification: Within 180 days after completion of rough grading, Basic's responsible civil engineer shall submit the above documents to the CBO for review and approval. Basic shall file with the CEC staff a copy of the CBO's review comments and approval.

10. Prior to final foundation excavation or preparation, Basic's responsible civil engineer for plant site activities shall submit to the CEC staff and the CBO:

- o Any report of foundation investigations to comply with the UBC, Chapter 29, Subsections 2905 (b, c and d);
- o Four sets of proposed foundation plans including soil classification and design bearing capacity (ASTM D422-632, D1556-82, D1557-78, D2487-69, D2922-81 and D3017-78);
- o A signed statement that the proposed plans comply with the criteria and requirements set forth in sections 4.2, 10.7 and Appendixes C and D to the AFC (Exhibit 1) and also the requirements of the 1985 Edition of the UBC, Chapters 29 and 70. Basic shall send a copy of the transmittal letter to the CEC staff.

Verification: At least 90 days prior to final foundation excavation or preparation, Basic's responsible civil engineer shall submit the above documents to CEC staff and the CBO. If the CBO finds the work described in the proposed foundation plan conforms with said criteria and requirements, Basic shall obtain one complete set of the submitted plans stamped and signed with the CBO's approval; Basic shall also submit written notice to the CEC staff (prior to beginning the approved construction) that the plans conform with said requirements and have been approved.

11. After completing foundation excavations, Basic's responsible civil engineer for plant site activities shall submit to the CBO for review and approval supplementary soil grading and geologic grading reports, as-graded grading plans, and a signed statement that any modifications in foundation design required by site geotechnical conditions were incorporated in the modified foundation plans approved by the CBO.

Verification: If the CBO approves said reports, as-graded grading plans, and revised foundation plans, Basic shall provide the CEC staff with such review comments and approvals in the next periodic report.

12. After completion of finish grading and erosion and sedimentation control facilities, Basic's responsible civil engineer for plant site activities shall:

    - o Submit to the CBO a final as-graded grading plan, final erosion and sedimentation control plans, a signed statement that these documents conform with the final approved combined grading plan and, if required by the CBO, supplementary soil grading and geologic grading reports.

    - o Notify the CBO in writing that the work is ready for final inspection (UBC 1985 Edition; King City Ordinance No. 470).

    Verification: Within 180 days after completion of finish grading and erosion and sedimentation control facilities, Basic's responsible civil engineer for plant site activities shall submit the above documents to the CBO for review and approval and shall submit transmittal letters to CEC staff. Basic shall seek final approval from the CBO only after all required submittals are received and reviewed and after all work, including installation of all drainage facilities and their protective devices and all erosion control measures, have been completed in accordance with the final approved combined grading plan. Basic shall notify the CEC staff in the next periodic report when final approval has been issued.

13. Basic shall submit to the CBO for review five sets of plans and three sets each of calculations and specifications for the spill containment facilities around the chemical storage area, the fuel oil storage tanks, and acid and caustic storage tanks. The design plans and calculations shall be signed and stamped by the responsible civil engineer. Basic shall send a copy of the transmittal letter to the CEC staff. (ACI 318-83, 318.1-83; ASTM A82-79, A185-79, A615-82, UBC 1985 Edition, Chapter 26; U.S. EPA, 40 CFR 112; CAC, Title 8, Chapter 4, Article 145; USACE).

    Verification: At least 60 days prior to the start of construction of the spill containment facilities, Basic shall submit the above documents to the CBO for review and a copy of the transmittal letter to the CEC staff. If the CBO finds said documents conform to applicable criteria, Basic shall obtain one complete set of the submitted plans, stamped and signed with the CBO's approval. Basic shall submit written notice to CEC staff (prior to beginning work) that the spill containment facilities have been approved by the CBO and conform to the applicable requirements.

14. After construction of the spill containment facilities, Basic shall submit the as-built plans and a signed statement by the responsible civil engineer that the work was done in accordance with the final approved plans and that the spill containment facilities are adequate for their intended function. (CAC, Title 8, Chapter 4, Article 145).

    Verification: Within 90 days after completion of the spill containment facilities, Basic shall submit said documents to the CBO for review. Basic shall file with the CEC staff a copy of such review comments and approvals.

C. Electrical Engineering

Electrical engineering review addresses whether the major electrical equipment ratings are adequate for system operating requirements, whether the proposed electrical equipment will operate safely during electrical fault conditions, and whether the specified equipment will comply with the applicable standards, ordinances, and laws.

The proposed project includes a 60 kV substation and the cogeneration power train consisting of a gas turbine generator, a steam turbine generator, and associated ancillary electrical components (Nov. 5, 1986 RT 62, 75). The gas turbine's output is 85.50 MW, and the generator proposed for this unit is rated at 87.50 MW (102.941 MVA). The steam turbine's output is 36.4 MW, and its companion generator is rated at 39.15 MW (43.5 MVA). Both generators are therefore adequate to accommodate the full output of their respective turbines (Nov. 5 RT 63, 82). Each generator is connected to a separate low voltage winding in the main step-up transformer which connects to the PGandE high-voltage transmission system. The transformer is adequately sized to deliver all power generated by the proposed facility (Nov. 5, 1986 RT 62, 63, 75, 83).

Power for the plant's electrical equipment is supplied from two auxiliary transformers. One transformer, rated 5/6.67 MVA, is adequate to supply the total auxiliary load of the cogeneration plant (4.75 MVA) should the second (750 kVA) auxiliary transformer fail (Nov. 5, 1986 RT 62-62, 82-83). Calculations by both Staff and Applicant demonstrate that the electrical equipment will perform safely during electrical fault conditions (Nov. 5, 1986 RT 63, 84-86).

The evidence of record thus establishes that, with the implementation of the Conditions below, the proposed electrical equipment will meet applicable standards, ordinances, and laws, as well as the performance objectives for equipment ratings and safety (Nov. 5, 1986 RT 63, 69, 87; Exhibit 5).

FINDINGS

Based on the evidence of record, the Commission finds:

1. With the implementation of the Conditions of Certification below, the proposed project's electrical equipment will meet the applicable laws, ordinances, regulations, and standards identified in the "Electrical Engineering" portion of Appendix A of this Decision.

2. With the implementation of the Conditions of Certification below, the proposed project's electrical equipment ratings will be adequate for system requirements.

3. With the implementation of the Conditions of Certification below, the proposed project's electrical equipment will operate safely under electrical fault conditions.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall produce design drawings, perform calculations, and write specifications for electrical equipment to ensure that the electrical equipment for the American 1 Cogeneration Project is designed in accordance with applicable standards, ordinances, and laws and the National Electric Code (NEC), and shall incorporate these specifications in the purchase orders. Drawings, specifications, and calculations prepared by the responsible electrical engineer shall be signed and stamped.

   Verification: The responsible electrical design engineer, registered to practice electrical engineering in the State of California, shall stamp and sign all drawings, plans, and calculations prepared by him or under his supervision and shall submit a signed statement to the CBO and to the CEC staff, no later than 30 days prior to start of installation, that the proposed final design plans and specifications conform with all of the requirements set forth in the Commission Decision and the NEC. Basic shall request the CBO to verify that the documents submitted are in compliance with the applicable standards, ordinances, and laws.

2. Thirty (30) days or a lesser number of days mutually agreeable to the CBO, but not less than twenty (20) days before start of electrical

equipment installation, Basic shall submit to the CBO five sets each of the following:

a. Final design plans including:

- o one-line diagrams for the 60 kV, 13.8 kV and 4.16 kV systems
- o system grounding drawings
- o lighting drawings
- o general arrangement or conduit drawings and
- o other plans as required by the CBO

b. Final calculations to establish:

- o short circuit ratings of equipment
- o ampacity of feeder cables*
- o voltage drops in feeder cables*
- o coordination/calculation for relay settings
- o other calculations as required by the CBO

Verification: At least ten (10) days before start of installation, Basic shall submit to the CEC staff a copy of a letter from the CBO that the items listed under a and b above are approved in accordance with the applicable standards, ordinances, and laws.

3. To ensure safe design, Basic shall construct as per CBO approved plans, and have the completed installation inspected by the CBO in accordance with the requirements of applicable standards, ordinances, and laws and the NEC.

   Verification: Prior to the initial turbine operation, Basic shall submit a statement to the CEC staff from the CBO that the power plant construction conforms to applicable portions of the NEC and Title 24, California Administrative Code.

4. To ensure that the electrical equipment short circuit ratings are adequate with the proposed step-up transformer modification, Basic shall submit to the CBO detailed short circuit calculations on each voltage level and their comparison to the ratings of the specified equipment.

   Verification: Basic shall submit to the CBO, within 30 days after certification, calculations of the short circuit requirements at the various system voltages in the project.

5. Basic shall incorporate all applicable industrial standards (Nov. 5, 1986 RT 95-105) in the design documents, procurement specifications, and purchase orders for the following list of equipment:

   - o Generator Units and accessories
   - o Battery and Battery Chargers
   - o Cable
   - o Cable trays
   - o Cathodic Protection Equipment
   - o High Voltage Circuit Breakers
   - o Conduit

- o Disconnect Switches
- o Distribution Panels
- o Grounding Materials
- o Lighting Materials
- o Lighting Fixtures
- o Lightning Arrestors
- o Heat Tracing Equipment
- o Load Centers
- o Switchgear
- o Transformers: Main and Auxiliary
- o Non-Segregated Bus
- o Motor Control Centers
- o Grounding Resistors and Relay Panels

Verification: Upon delivery of this equipment to the site, Basic shall submit to the CEC staff a list of all applicable standards for each item listed above, accompanied by a statement from each equipment vendor certifying that the equipment has been designed and fabricated in accordance with the listed standards, and verified by Basic's quality assurance representative.

D. Engineering Geology

The Engineering Geology topic addresses the potential impact of the proposed project on geologic resources, and the influence of geologic conditions on project design, construction, and operation.

No significant mineral or gravel deposits exist at the project site or along the transmission line route; thus the proposed project will have no adverse impacts on geologic resources (Nov. 5, 1986 RT 112, 131).

The project site is located on level ground at the base of a natural 35-foot terrace slope northeast of the project area. The site itself is nearly flat and will not be subject to lateral slope movements during an earthquake. The slope will not be disturbed by construction activities and is expected to remain stable through the life of the project. The terrace is sufficiently distant so that the site will not be affected even should the slope fail (Nov. 5, 1986 RT 112, 113, 131, 138).

The project facilities will rest on Groups 1 and 2 soils, which contain sands and silts, and which in turn overlay the gravelly sands of Group 3 soils. The Groups 1 and 2 soils are above groundwater level, and the Group 3 soil is not subject to liquefication. It is possible that the groundwater level could rise into the Group 1 and 2 soils after which a major earthquake could cause liquefaction. However, such a combination of events is very unlikely (Nov. 5, 1986 RT 113-114, 138). Fluid extraction in the area has not caused ground subsidence, nor is subsidence expected due to project-related fluid withdrawals (Nov. 5, 1986 RT 115, 132).

The surface layer of the site contains silty clay which is subject to swelling or shrinkage when wetted or dried. In order to mitigate this problem, Applicant will remove and replace this soil with granular material (Nov. 5, 1986 RT 114, 132). The bearing capacity of the site soil will support most plant facilities on shallow footings; driven pile foundations will support the steam and gas turbines and the heat recovery steam generator (Nov. 5, 1986 RT 14, 131).

The site is located in an area of significant seismicity due to the proximity of active or potentially active faults, including the San Andreas and the King City-Reliz-Rinconada fault systems. The closest fault is 3 miles from the site, and there is thus a low likelihood of ground surface rupture. However, the proximity to these faults exposes the site to potentially strong ground shaking. With the implementation of the identified mitigation measures, potential damage to project facilities will be minimized should a seismic event occur (Nov. 5, 1986 RT 113, 132, 138, 139-140).

The proposed project will have no significant impacts to geologic resources and, with the implementation of the Conditions of Certification below, the project will be constructed to account for reasonably foreseeable geologic hazards (Nov. 5, 1986 RT 122; Exhibit 6).

FINDINGS

Based on the evidence of record, the Commission finds:

1. The proposed project will have no significant impacts on geologic resources.

2. With the implementation of the Conditions of Certification below, the project will be constructed in accordance with applicable laws, ordinances, and standards identified in the "Engineering Geology" portion of Appendix A of this Decision.

3. With the implementation of the Conditions of Certification below, impacts to the project due to geologic hazards will be minimized.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall assign to the project an engineering geologist (to be present as needed), certified by the State of California, to monitor engineering geologic conditions. This is to assure that conditions encountered during excavation are similar to those described in the Application for Certification (AFC) and data responses as may be modified by additional design explorations. The engineering geologist will also assure that any adverse conditions encountered are mitigated in a safe, environmentally sound manner. This shall include:

   - Monitoring compliance with design intent in engineering geologic matters;
   - Providing consultation during the design and construction of the project;
   - Evaluating geologic conditions and geologic safety; and
   - Recommending field changes to the responsible civil engineer.

   Verification: At least ten (10) days prior to the submittal of proposed grading plans (at least 30 days prior to the start of site preparation) Basic's responsible design engineer shall inform the CEC staff and designated CBO of the name(s) and license or registration number(s) of the assigned engineering geologist(s). Personnel changes shall be noted and pertinent data submitted in the next subsequent monthly construction report.

2. To assure that the facilities are constructed in accordance with pertinent laws, ordinances, regulations, standards, plans, and policies, the California certified engineering geologist shall sign all preconstruction, construction, and post-construction reports pertaining to the engineering geologic suitability of the plant site and transmission line corridor.

   Verification: At least ten (10) days prior to the submittal of proposed grading plans (at least 30 days prior to the start of site preparation), Basic's responsible design engineer shall set forth to the CEC staff and designated CBO the name(s) and certification number(s) of the assigned engineering geologist(s). Personnel changes shall be noted and pertinent data submitted in the next subsequent monthly construction report.

3. If geologic conditions do not differ substantially from those conditions described on the Site and Vicinity Geologic Description (Nov. 5, 1986 RT 127-128), then Basic shall implement its proposed mitigation measures as identified during the AFC proceeding.

   Verification: Basic's certified engineering geologist shall verify compliance wth Basic's proposed mitigation measures in the geologic grading report and "as-graded" grading plan.

4. Basic shall ensure that geologic records of site inspections, especially detailed logs of excavated surfaces, will be made during site preparation and submitted to the CEC staff upon request.

   Verification: Basic shall notify the CEC staff of the availability of geologic records of site inspections.

E. Mechanical Engineering

Mechanical engineering review assesses whether the major mechanical equipment, piping, vessels, and tanks will be constructed and installed in accordance with applicable standards, ordinances, and laws; whether the heating, ventilating, air conditioning (HVAC) and plumbing systems will be designed and installed in accordance with applicable codes and standards; and whether the equipment will perform the intended functions.

Applicant has not yet identified the manufacturer or model of equipment to be used, other than for the combustion turbine generator.[78] The proposed GE 7001EA combustion turbine generator has been widely used in the industry and, based on its history, can be expected to meet design criteria. Conceptually, Applicant's proposed preliminary design and construction specifications provide for adequate capacity margins and redundancy so that all major equipment and components are expected to perform as intended (Nov. 5, 1986 RT 155-156, 180-181). The mechanical engineering aspects also appear sufficient to achieve the project objective of providing process steam for food drying operations and generating electricity for sale to PGandE (Nov. 5, 1986 RT 171).

Applicant will include all applicable industrial standards in the equipment purchase orders, and these standards will be reflected in the manufacturers' drawings during the final engineering design phase, subject to

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78. The AFC was filed at the beginning of the preliminary engineering phase of the design process. The lack of data on the remaining equipment is not uncommon for this stage of the design process (Nov. 5, 1986 RT 179-180).

quality assurance surveillance (Nov. 5, 1986 RT 178). Compliance with the Conditions of Certification below will reasonably assure that the facility is designed and constructed to comply with all applicable laws, ordinances, regulations, and standards, and that it will meet project performance objectives (Nov. 5, 1986 RT 163, 180; Exhibit 7).

FINDINGS

Based on the evidence of record, the Commission finds:

1. Preliminary phase review of the American 1 Cogeneration Project indicates it can be designed and constructed in conformity with the applicable standards, ordinances, and laws identified in the "Mechanical Engineering" portion of Appendix A of this Decision.

2. From a Mechanical Engineering perspective, the American 1 Project is reasonably expected to meet the stated objective of providing process steam and generating electricity.

3. Further review of the final design of the American 1 Cogeneration Project is necessary, and will occur during the post-certification stage.

CONDITIONS OF CERTIFICATION

1. Basic shall incorporate all applicable standards, ordinances, and laws including industrial standards in its design documents, procurement specifications and purchase orders for the following list of equipment:

   - Gas Turbine-Generator
   - Heat Recovery Steam Generator
   - Steam Turbine Generator
   - Condensate Pumps
   - Boiler Feed Pumps
   - Cooling Tower
   - Circulating Water Pumps
   - Steam Surface Condenser
   - Auxiliary Steam Boilers
   - Demineralizer Trains
   - Deaerator
   - Fuel Oil Storage Tank
   - Fuel Oil Unloading Pumps
   - Fuel Oil Forwarding Pumps
   - Makeup Water Tank
   - Anhydrous Ammonia Tank and System

   Verification: Upon delivery of this equipment to the site, Basic shall submit to the CEC staff a list of all applicable standards for each of the above-listed equipment, accompanied by a statement from each

equipment vender certifying that the equipment has been designed and fabricated in accordance with the listed standards, and verified by Basic's quality assurance representative.

2. Prior to the intended start date of the first increment of construction, Basic shall furnish to the CBO and CEC staff a schedule for submittal of mechanical component packages. The schedule must contain a description list of proposed packages of mechanical plans, required calculations and specifications, as well as the estimated date of submittal.

   Verification: Basic shall submit the schedule to the CBO and CEC staff at least 180 days (or lesser number of days mutually agreeable to the CBO and CEC staff) prior to the intended start date of the first increment of construction.

3. Basic shall design and install all piping, other than domestic and refrigeration, to ANSI B31.1 (Power Piping Code), ANSI B31.2 (Fuel Gas Piping Code), ANSI B31.3 (Chemical Plant and Petroleum Refinery Piping Code), and ANSI B31.8 (Gas Transmission and Distribution Piping Code) and NFPA. Prior to the start of any increment of construction, Basic shall submit 3 copies each of the proposed final design drawings, specifications, calculations, and applicable quality control procedures for each plant piping system to the CBO with a copy of the transmittal letter to CEC staff. The final plans, specifications, and calculations shall reflect clearly the inclusion of approved criteria, assumptions, and methods used in the design.

   The responsible engineer, registered to practice mechanical engineering in the State of California, shall submit a signed and stamped statement to the CBO and to the CEC staff that the proposed final design plans, specifications, and calculations conform with all of the requirements set forth in the Commission Decision. The responsible engineer also shall submit a signed and stamped statement to the CBO and to the CEC staff that all of the other piping systems, except domestic and refrigeration, have been designed, fabricated, and installed in accordance with all applicable ordinances, regulations, laws, and industry standards.

   The principal piping systems for which design plans, specifications, calculations, and quality control procedures shall be submitted are:

   a. Condensate system
   b. Boiler feedwater systems
   c. Main steam system
   d. NO_x Control system
   e. Process steam system
   f. Natural gas supply system
   g. Fuel oil system
   h. Fire water system
   i. Acid and caustic system
   j. Ammonia transfer and feed system

   Verification: Basic shall submit the required documents, including a copy of the signed and stamped engineer's certification, to the CBO at least 120 days (or a lesser number of days mutually agreeable to the CBO

and CEC staff) prior to the intended start of any increment of construction or fabrication. Basic shall submit a letter to the CEC staff with copies of the CBO comments and approvals to certify completion of both the plan-check and installation. The CBO may require, as necessary, Basic to employ special inspectors to report directly to the CBO to monitor shop fabrication or equipment installation.

4. Basic shall ensure that all pressure vessels are designed, fabricated and installed in accordance with ASME Code VIII, and CAC, Title 8, Chapter 4, including those prefabricated vessels furnished by vendors. Prior to the intended start of fabrication or construction, Basic shall submit six (6) sets each of the proposed final design plans, and three (3) sets each of the specifications, calculations, and quality control procedures for each pressure vessel to the CBO with a copy of the transmittal package to the CEC staff. In addition the responsible design engineer, registered to practice mechanical engineering in the State of California, shall stamp and sign all drawings, specifications, and calculations. The responsible design engineer shall submit a statement to the CBO and the CEC staff that the proposed final design plans, specifications, and calculations conform with all of the requirements set forth in the CAC, Title 8 and ASME Boiler Pressure Vessel Code Section VIII. For all pressure vessels installed in the plant, Basic shall submit to the CBO and Cal/OSHA, prior to installation, certified code papers and other documents required by standards, ordinances, and laws.

   Verification: Basic shall submit the plans, calculations, and specifications (including a copy of the signed and stamped engineer's certification) to the CBO and the CEC staff at least 120 days (or a lesser number of days mutually agreeable to the CBO and the CEC staff) prior to the intended start of fabrication, construction, or installation. Basic shall request written notification from the CBO that the plan check and installation are in accordance with the code requirements. In addition, Basic shall request Cal/OSHA to verify the proper implementation of the above codes through on-site inspection. Basic shall send copies of CBO and Cal/OSHA comments and approvals to the CEC staff in the next monthly Construction Progress Report. Basic shall furnish the CBO and CEC staff with the code certification papers and any other documents required by the code at least 30 days prior to the initial operation of each pressure vessel.

5. Basic shall ensure that the HRSG, including superheater, steam drums, and all duct work, are designed, fabricated, and constructed in accordance with ASME Section I, and ANSI B31.1.

   Verification: At least 120 days (or lesser number of days mutually agreeable to the CBO and the CEC staff) prior to the intended start of construction, Basic shall submit to the CBO the documents pertaining to the above and a certification by the vendor certifying compliance with the applicable standards, ordinances, and laws. Basic shall request written notification from the CBO as to whether the plan check and the installations are in accordance with the code requirements. Basic shall send copies of CBO and Cal/OSHA comments and approvals and Cal/OSHA inspections results, as appropriate, to the CEC staff in the next monthly Construction Progress Report.

6. Basic shall design and install all heating, ventilating, air conditioning, and refrigeration systems within buildings and related structures in accordance with the Uniform Mechanical Code and other applicable standards, ordinances, and laws. Prior to the intended start of construction, Basic shall submit three sets each of the proposed final design plans, specifications, calculations, and quality control procedures for each HVAC system to the CBO, with a copy of the transmittal letter to the CEC staff. The final plans, specifications, and calculations shall clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design. In addition, the responsible mechanical design engineer, registered to practice mechanical engineering in the State of California, shall sign all plans, drawings, and calculations and submit a signed statement to the CBO and to the CEC staff that the proposed final design plans, specifications, and calculations conform with all applicable standards, ordinances, and laws.

   Verification: At least 120 days (or lesser number of days mutually agreeable by the CBO and the CEC staff) prior to the intended start of construction, Basic shall submit the three (3) copies of the required calculations, plans, and specifications (including a copy of the signed and stamped statement from the design engineer certifying compliance to the applicable standards, ordinances, and laws) to the CBO. Basic shall request the CBO perform the plan check and inspection required to ascertain that the above HVAC and refrigeration systems have been fabricated and installed in accordance with the Uniform Mechanical Code and other applicable standards, ordinances, and laws. Basic shall employ special inspectors and report directly to the CBO to monitor shop fabrication of equipment if required by the CBO. Basic shall request written notification from the CBO as to when the HVAC system is ready for operation. Basic shall send copies of CBO comments and approvals to CEC staff in the next monthly Construction Progress Report.

7. Basic shall design, fabricate, and install:

   a. Plumbing in accordance with Title 24, CAC, Division 5, Part 5, and Uniform Plumbing Code.

   b. Potable water system in accordance with Title 24, CAC, Division 5, Part 5, Article P10, and Uniform Plumbing Code.

   c. Drainage system including sanitary drain and waste system in accordance with Title 24, CAC, Division 5, Part 5, Articles P4, P5, P6, and P7, and Uniform Plumbing Code.

   d. Toilet rooms and number of toilet rooms in accordance with the Uniform Plumbing Code, Appendix C, and Title 24, CAC, Part 2.

   e. Energy conservation in the control and maintenance building in accordance with Title 24, CAC, Division 5, Chapter 2-53, Part 2.

   f. Temperature and ventilation requirements in accordance with Title 24, CAC, Division 5, Chapter 2-53, Part 2.

Prior to the intended start of construction, Basic shall submit three sets each of the proposed final design plans, and three sets each of the specifications, calculations, and quality control procedures for each mechanical system to the CBO including water and sewer connection permits issued by the city, with a copy of the transmittal package to the CEC staff. The final plans, specifications, and calculations shall clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design. In addition, the responsible mechanical design engineer, registered to practice mechanical engineering in the State of California, shall stamp and sign all plans, drawings, and calculations and submit a signed statement to the CBO and to the CEC staff that the proposed final design plans, specifications, and calculations conform with all of the requirements set forth in the Commission Decision.

Verification: At least 120 days (or a lesser number of days mutually agreeable to the CBO and CEC staff) prior to the intended start of construction, Basic shall submit the documents including a copy of the signed and stamped statement from the design engineer certifying the compliance to the applicable standards, ordinances, and laws. Basic shall request approval from the CBO confirming that the cited sanitary facilities have been designed, fabricated, and installed in accordance with the cited applicable standards, ordinances, and laws. Basic shall employ special inspectors to monitor shop fabrication and/or field installation, as required by the CBO. Basic shall request the CBO return two complete sets of the approved submittal. Basic shall request written notification from the CBO as to when the sanitary facilities are ready for operation. Basic shall send copies of CBO comments and approvals to the CEC staff in the next monthly Construction Progress Report.

F. Structural Engineering

This topical review of the proposed project's structural design criteria analyzes whether such criteria are sufficiently detailed to assure that design and construction will safeguard against danger to personnel and property, and will comply with applicable standards, ordinances, and laws. This review also examines whether the seismic design criteria and analysis methods are sufficient to achieve seismic performance objectives and mitigate site seismic hazards.

The fundamental structural engineering performance objectives are to design and construct the proposed facility to minimize loss of generating capacity as well as risk to personnel should seismic events of varying magnitudes occur (Dec. 3, 1986 RT 351, 352). In analyzing the proposed project, Staff applied criteria similar to those which would be applied to a utility-owned facility (Dec. 3, 1986 RT 389).

Applicant originally proposed to design the facility to resist a moderate ground shaking with an estimated peak ground acceleration (PGA) of 0.14 with little or no equipment outages. This criterion would have approximately a 46 percent probability of exceedance during the 30-year plant life. Staff contested the adequacy of this design criterion, and proposed instead a design based upon an estimated PGA of 0.25; this criterion would result in only a 15 percent probability of exceedance during the life of the facility (Dec. 3, 1986 RT 347, 365). The parties resolved this and other differences regarding structural design matters at a workshop on November 19, 1986, with Applicant agreeing to incorporate Staff's modifications (Dec. 3, 1986 RT 333-35, 344,

365). The parties agree that the seismic design methods will result in an operationally reliable design which meets the specified power demands and meets or exceeds minimum safety requirements (Dec. 3, 1986 RT 366).

With the adoption of the proposed modifications reflected in the Conditions of Certification below, the structural and seismic design criteria and analysis methods are adequate to ensure the proposed project will meet performance objectives and comply with the applicable standards, ordinances, and laws (Dec. 3, 1986 RT 336, 370-371; Exhibit 22).

FINDINGS:

Based upon the evidence of record, the Commission finds:

1. Preliminary phase review indicates that, with the implementation of the Conditions of Certification, the American 1 project can be designed and constructed in conformity with the applicable standards, ordinances, and laws identified in the "Structural Engineering" portion of Appendix A of this Decision.

2. Further review of the final design of the American 1 project is necessary, and will occur during the post-certification stage.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall design, construct, and inspect the cogeneration facility in accordance with applicable standards, ordinances, and laws identified in Appendix A of the Commission Decision, seismic design criteria in Structural Engineering: Table 1, Column (3) (Dec. 3, 1986 RT 367), the proposed modifications (Id. 366 and 367), the Response Spectrum (Id. 368), and the pertinent portions of Basic's documents listed under Summary of Applicant's Proposal (Dec. 3, 1986 RT 352).

   Verification: Fourteen (14) days prior to the start of commercial operation, Basic's Project Manager shall submit to the CEC staff a statement of verification that all design, construction, and inspection requirements of the applicable standards, ordinances, and laws and of the Commission Decision have been met for the area of structural engineering.

2. Basic shall assign to the project a responsible Design Engineer who shall be either a registered civil engineer with the authority to use the title "Structural Engineer" in California, or a registered California Civil Engineer who shall be fully competent and proficient in design of power plant structures and equipment supports. The design engineer shall:

   a. Be directly responsible for design of proposed structures and equipment supports;

   b. Provide consultation to the responsible construction engineer during design and construction of the project;

   c. Monitor construction progress to insure compliance with design intent;

   d. Evaluate and recommend necessary changes in design;

   e. Prepare and sign all necessary building plans, specifications, and calculations.

   Verification: At least 60 days (or a lesser number of days mutually agreeable to the CBO and CEC) prior to submittal of building plans, Basic shall submit to the CEC staff the qualifications of the responsible design engineer assigned to the project to perform the duties set forth above.

3. Basic shall submit to the CEC two sets of preliminary plans and seismic design criteria for the HRSG. The plans shall show the structural configuration and the clearance between piping and framing.

   Verification: CEC staff will review and concur (if appropriate) that the clearance, structure configuration, and seismic design criteria are consistent with the requirements of this Decision prior to the final design and within 30 days of receipt.

4. Prior to the intended start of construction of each structure, equipment support, equipment anchorage, or foundation, or the fabrication or field installation of the CTG, CTG inlet structure, STG, HRSG, cooling tower, transformers, switchyard equipment, auxiliary boilers, stacks, and ASME pressure vessels, Basic shall submit six sets each of proposed final design plans and three sets of the specifications, calculations, soils report, and quality control procedures for each structure, equipment support, equipment anchorage, foundation, CTG, STG, HRSG, ASME pressure vessel, or other equipment item to the CBO with one copy of a complete transmittal package to CEC. The transmittal package shall contain plans, calculations, specifications, soils report and quality control procedures.

   Plans, calculations, and specifications for foundations that support structures shall be filed concurrently with the structure plans, calculations, and specifications. The final plans, calculations, and specifications shall clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design, and be signed and stamped by the responsible design engineer. In addition, the responsible

design engineer shall submit a signed statement to the CBO and to the CEC that the proposed final design plans, specifications, and calculations conform with the requirements set forth in the Commission Decision.

Verification: Basic shall submit the plans, calculations, and other required documents to the CBO and CEC staff at least 120 days (or a lesser number of days mutually agreeable to the CBO and CEC staff) prior to the intended start of each equipment item, structure, equipment support, or foundation. If the CBO discovers non-conformance with the stated requirements, he shall notify Basic's responsible design engineer within 75 days of the submittal date and shall return the non-conforming portion of the plans to Basic for correction. Basic's responsible engineer shall resubmit the corrected plans within 30 days of the return to Basic of the non-conforming submittal.

The CBO shall return two complete sets of original or revised submittals, stamped and signed with his approval, to Basic within 120 days of the original submittal, provided the plans comply with the stated requirements. Basic shall submit written notice to the CEC staff that the proposed building plans, specifications, and calculations are determined by the CBO to be in accordance with the requirements set forth in this decision and in the applicable standards, ordinances, and laws, and that he has approved them.

5. Basic shall make payments to the CBO equivalent to the fees listed in the Uniform Building Code (UBC) Chapter 3, Sections 304(a) and (b), and Table No. 3-A for the plan review and permit. If the city or county in which the plant is to be built has adjusted the UBC fees by county ordinance or code, Basic shall pay the adjusted fees.

   Verification: Basic shall make payment to the CBO at the time of submittal of the plans, specifications, calculations and soils report, and notify the CEC staff that the payment has been made.

6. Basic shall apply for an "in lieu" building permit and upon receipt of payment and approval of the proposed building plans, the CBO shall issue the permit to Basic.

   Verification: The CBO shall notify the CEC staff that an "in-lieu" building permit has been issued to Basic.

7. Basic shall keep the CBO informed regarding the status of construction.

   Verification: Basic shall submit a monthly construction progress report to the CBO and the CEC staff.

8. Inspections shall be performed in accordance with Chapters 3 and 70 of the 1985 UBC. Basic shall assign as a resident engineer a registered Civil Engineer in the State of California who shall be present on the site as required to monitor construction activities, who shall have the authority to halt construction and to require changes or remedial work if the work does not conform to the applicable requirements, and who shall be responsible for the special and continuous inspections required by UBC Section 306. All welding, such as structural, piping, tanks, and

pressure vessels, shall be inspected by a certified weld inspector (AWS and/or ASME as applicable). Names and qualifications of the resident registered civil engineer, the certified weld inspector, and other special inspectors shall be submitted to the CBO and CEC at least 60 days (or a lesser number of days mutually agreeable to the CBO and CEC) prior to start of any activity requiring special inspection in accordance with UBC Section 306, Chapters 3 and 70.

Verification: Prior to issuance of the "in-lieu" building permit, Basic shall identify the resident civil engineer, the certified weld inspectors, and the certified special inspectors to the CBO and the CEC staff. The CBO shall notify Basic and the CEC staff of all approvals or disapprovals of the resident civil engineer, weld inspectors, or special inspectors.

9. All structural work shall be subjected to inspection by the CBO and the CEC staff. Basic shall notify the CBO and the CEC staff when the work is ready for inspection.

   Verification: All inspectors shall file a monthly report of their inspections with the CBO. If any inspector finds that the work is not being done in accordance with the approved plans, the discrepancies shall be reported immediately to Basic's resident engineer, to the CBO, and to the CEC staff. The inspector shall prepare a subsequent written report sending copies to Basic, the CBO, and the CEC staff.

10. If any changes to the approved final plans are deemed necessary, Basic shall file with the CBO and CEC design changes to the final plans as required by UBC, Section 303, submitting six sets of the revised drawings and three sets of the specifications and calculations to the CBO with one copy of the transmittal package to CEC, and shall notify the CBO at least 15 days in advance of the intended filing (UBC, Chapter 3). The transmittal package shall contain revised drawings, specifications, and calculations.

    Verification: The CBO shall return two sets of submittals stamped and signed with his approval to Basic within 30 days (or a lesser number of days mutually agreeable to the CBO and the CEC staff) provided the plans comply with the stated requirements, and shall notify the CEC staff that he has approved the revised plans.

11. Upon completion of any structure, equipment support, or anchorage, Basic's responsible design engineer shall submit to the CBO and CEC: (a) a written notice that the structure is ready for final inspection, and (b) a signed statement that the structure conforms with the final approved building plans. Final "as-built" drawings shall be submitted to the CBO within six months of completing construction of each structure, foundation, or equipment support. Changes approved by the CBO shall be identified on the "as-built" drawings.

    Verification: The CBO shall inspect the completed structures and review the submitted documents. When the work and the as-built plans conform with the final approved building plans, the CBO shall give them final approval and shall notify the CEC staff and Basic of such approval. The CBO shall issue a Certificate of Occupancy after final approval.

12. Basic shall submit weekly to the CBO and CEC two sets each of the following data:

    - o Concrete cylinder strength test reports (including date of testing, date of sample taken, design concrete strength, tested cylinder strength, age of test, type and size of sample, location and quantity of concrete placement from which sample was taken, mix design designation and parameters)
    - o Concrete pour sign-off sheets
    - o Bolt torque inspections reports (including location of test, date, bolt size, recorded torques)
    - o Field weld inspection reports (including type of weld, location of weld, inspection or non-destructive testing (NDT) or procedure and results, welder qualifications, certifications, qualified procedure description or number [ref: AWS])
    - o Reports covering other structural activities requiring special inspection in accordance with UBC, Section 306

    Verification: The CBO shall review the above reports and shall indicate approval/disapproval to Basic within 30 days with copies to the CEC staff, provided specific test results comply with identified requirements. If disapproved, the CBO shall immediately advise the CEC staff of the reason for disapproval.

13. At least 195 days (or lesser number of days mutually agreeable to the CBO and the CEC staff) prior to the intended start date of the first increment of construction, Basic shall furnish to the CBO and CEC a schedule of structural plans submittals, a Master Drawing List, and a Master Specification List. The schedules shall contain a description list of proposed submittal packages of structural plans, calculations, and specifications for the structures and critical electrical and mechanical equipment, and the estimated date of submittal.

    Verification: Basic shall submit the schedule, Master Drawing List, and Master Specification List to the CBO and the CEC staff, and shall provide monthly updates.

14. Basic shall ensure that all field fabricated tanks shall be designed, fabricated, and installed in accordance wth AWWA D-100 or API-650 (as applicable) and CAC, Title 8, Chapter 4. In cases where conflicts between cited codes (or standards) exist, the requirements of the more conservative code will be met. When the codes do not use consistent design methodologies and it is not clear which code governs, both (all) codes will be checked individually to ensure compliance with each code. Loads and allowables obtained from different codes will not be mixed. Prior to the intended start of construction or fabrication of any tank, Basic shall submit six sets each of proposed final design plans, and three sets each of the specifications, calculations, and quality control procedures for each tank to the CBO with one copy of the complete

transmittal package to CEC. The transmittal package shall contain plans, specifications, calculations, and quality control procedures. In addition, the responsible design engineer shall be a registered structural engineer with the authority to use the title "Structural Engineer" in the State of California or a California Registered Civil Engineer, fully competent and proficient in the design of tanks, their foundations, anchorages, and related equipment, and shall: (a) sign and seal the plans, calculations, and specifications; and (b) submit a signed statement to the CBO and CEC that the proposed final design plans, specifications, and calculations conform with all the requirements set forth in the Commission Decision.

Verification: Basic shall submit the required documents at least 120 days (or a lesser number of days mutually agreeable to the CBO and the CEC staff) prior to the intended start of construction. Basic shall notify the CEC staff, in writing, that the CBO has verified that the plan-check and tank installation were in accordance with the Commission Decision and code requirements.

15. Basic shall design and construct the transmission line structures in accordance with CPUC GO 95.

Verification: At least 60 days (or a lesser number of days mutually agreeable to the CBO and the CEC staff) prior to construction Basic's responsible engineer shall submit six sets of plans, and three sets each of specifications and calculations of the transmission line structure, signed and stamped by the responsible design engineer, to the CBO with one copy of the complete transmittal package to the CEC staff. The transmittal package shall contain plans, specifications, calculations, soils report, and quality control procedures. The CBO shall return to Basic two complete sets of the submitted plans stamped with his approval, and Basic shall submit written notice to the CEC staff that the documents conform to said requirements and have been approved. Within 90 days after completion of the transmission line structure, Basic's responsible engineer shall get approval from the CBO and send the CEC staff a signed statement that the transmission line structure as built complies with CPUC GO 95.

G. Transmission Line Engineering

Transmission line engineering review addresses the adequacy of the American 1 transmission facilities with regard to capacity, economics, and reliability during normal and emergency conditions, and the impact of the proposed project upon the existing PGandE system. The switchyard, transmission line, and Coburn Substation termination were evaluated with respect to the following five performance objectives/criteria based on industry standards: 1) normal thermal ratings; 2) emergency thermal ratings; 3) energy losses; 4) reliability; and 5) bus voltages (Dec. 3, 1986 RT 9-10, 20).

The proposed American 1 project will have approximately a 120.1 MW net power output to the utility system. The switchyard at the cogeneration plant will have one 60 kilo Volt (kV) power circuit breaker (PCB) in a single bus configuration for one outgoing transmission circuit, with two 60 kV disconnect switches. The proposed outlet is a single-circuit 60 kV wood pole transmission line from the project site to the Coburn Substation. The line will consist of 2-bundle 1431 kCM aluminum conductors, and will follow preferred Route 1 along the west side of the Southern Pacific Railroad right-of-way. It will connect to the 60 kV bus at the Coburn Substation, where a new 60 kV PCB position, a new 60 kV PCB, and two new 60 kV disconnect switches will be installed (Dec. 3, 1986 RT 7-8, 21, 24).

Although Staff evaluated alternative transmission facilities, including joint facilities with the San Ardo project, the evidence of record established that the Applicant's proposed system is superior in terms of lowest capital

and annual costs (Dec. 3, 1986 RT 30, 39). Energy losses from the proposed transmission facilities are consistent with the life cycle costs at the current PGandE power value rate, as well as energy and resource conservation principles. Switchyard costs are expected to be insignificant (Dec. 3, 1986 RT 43). The 2-bundle 1431 kCM aluminum conductors have the lowest life cycle costs and thus are the most economical when compared to other conductor sizes (Dec. 3, 1986 RT 48-49). The cost of the new 60 kV PCB and associated equipment at the Coburn Substation similarly appears reasonable, and the proposed termination will have the lowest life cycle cost (Dec. 3, 1986 RT 10, 51, 54).

Because the radial single-circuit outlet will not provide more than the plant's output, the emergency current is equal to the normal peak current of 1,078 amperes (A). The PCB at the switchyard (with a 2,000 A continuous current rating), the transmission line's 2-bundle 1431 kCM aluminum conductors (with summer interior ratings of 1,856 A [normal rating] and 2,210 A [emergency rating]), and the new PCB at the Coburn Substation (with a 1,200 A continuous rating) all have adequate thermal capacity for normal and emergency conditions (Dec. 3, 1986 RT 9, 43, 44, 45). The Coburn Substation PCB will also have a 3,500 MVA interrupting rating which exceeds the symmetrical interrupting duty for the 60 kV bus of 1,168 MVA. While the American 1 project will create a net power flow increase of 66 MW in 1988 and 32 MW in 1993 resulting in less available transformer bank capacity, the increase will not exceed the transformer bank rating (Dec. 3, 1986 RT 8-10, 54).

In order to meet performance criteria/objectives for reliability, the transmission facilities should not cause an unreasonable impact on the

reliability of the PGandE system. Because the switchyard is on a dedicated 60 kV outlet with no other utility loads involved, and because the transmission line can be isolated from the PGandE 60 kV transmission system with the proposed PCB at Coburn Substation, the proposed system will not adversely affect the main system (December 3, 1986 RT 27, 31, 35, 40). While the Coburn Substation bus voltage variation expected during operation of American 1 is 7 percent, slightly exceeding the performance objective of ±5 percent, this variation does not appear to be detrimental to the PGandE system (Dec. 3, 1986 RT 10, 52, 54). The reliability of the proposed system compares favorably with other termination alternatives and complies with PGandE's planning and reliability criteria (Dec. 3, 1986 RT 8, 40-41).

With the implementation of the Conditions of Certification below, the American 1 transmission facilities will comply with applicable ordinances, laws, and industrial standards (Dec. 3, 1986 RT 53; Exhibit 18).

FINDINGS

Based upon the evidence of record, the Commission finds:

1. The proposed American 1 switchyard is adequate with regard to capacity, economics, and reliability.

2. The proposed American 1 transmission line is adequate with regard to capacity, economics, and reliability as an outlet to the PGandE transmission system, provided Basic uses 2-bundle 1431 kCM aluminum conductors.

3. The proposed Coburn Substation 60 kV termination is adequate with regard to capacity, reliability, and voltage to accommodate the power generated by the American 1 Cogeneration Project.

4. With implementation of the Conditions of Certification, the project will comply with the applicable standards, ordinances, and laws identified in the "Transmission Line Engineering" portion of Appendix A of this Decision.

5. The transmission line will follow Alternate Route 1.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall ensure that the design, construction, and operation of the proposed transmission outlet facilities shall conform to the following requirements:

   a. One 60 kV power circuit breaker with suitable continuous and interrupting current ratings shall be installed at the American 1 switchyard and Coburn Substation.

   b. Approximately 3.0 miles of 2-bundle 1431 kCM all aluminum 60 kV single-circuit wood pole transmission line shall be constructed between the American 1 switchyard and the termination at Coburn Substation. The transmission line route and structures shall not deviate from Route 1 as described in the AFC (Exhibit 1) and shown in Transmission Line Engineering: Figure 2 and Figure 4 (Dec. 3, 1986 RT 18 and 23).

   c. The transmission facilities shall meet or exceed the requirements of CPUC General Order 95, Rule 37.

   d. No other generating unit, no circuit, and no load other than as described in the AFC and amendments thereto and shown in Transmission Line Engineering: Figure 5 (Dec. 3, 1986 RT 26) may be connected to the cogeneration switchyard and outlet transmission circuit.

   Verification: No later than 60 days prior to construction of the transmission outlet facilities, Basic shall submit to the CEC Compliance Project Manager all pertinent drawings, such as one-line diagrams signed and sealed by a registered engineer in responsible charge, and an engineering description of Items 1a, 1b, and 1c, above.

2. Basic shall request and must receive authorization from the CEC for any variance from Condition No. 1, above, including any changes to the following:

   a. Route Specified: Route 1 per section 5 of the AFC (Exhibit 1)

   b. Connection Point: Coburn Substation

   c. Conductor Size: 2-bundle 1431 kCM all aluminum

   d. Number of Conductors: Two per phase

   e. Number of Circuits: One

   f. Voltage Level: Nominal 60 kV phase-to-phase

   g. Conductor Loading: 120.1 MW peak at rated site conditions

   h. Tower Types: Wood pole with post insulators

i. Capacity: One 60 kV circuit at a 1,856 A normal and 2,210 A emergency ratings

j. Any other change that may significantly affect the capacity, reliability, economic or energy losses of the transmission system.

Verification: Basic shall inform the CEC of any impending changes which may not conform to the requirements specified in the Commission Decision and request approval to implement such changes.

3. Basic shall be responsible for the inspection of the proposed transmission facilities during construction for conformance to Conditions 1 and 2, above, and any subsequently CEC approved changes thereto, as well as for conformance with CPUC General Order 95, Rule 37. In case of nonconformance, Basic shall inform the CEC in writing of such nonconformance and corrective actions to be taken.

Verification: Within 60 days following first successful synchronization with the PGandE system, Basic shall transmit to the CEC Compliance Project Manager an engineering description(s) and one-line drawings of the "as-built" facilities referred to in Conditions 1, 2, and 3, above. A statement attesting to conformance of General Order 95, Rule 37 shall be concurrently provided.

H. Transmission System Evaluation

This topic addresses the adequacy of the proposed transmission outlet facilities and the impact of the project's power transfer upon PGandE's transmission system. The American 1 Cogeneration Plant consists of one gas turbine-driven generator and one steam turbine-driven generator connected to a transformer to step up the voltage from 13 kV to 60 kV. This will connect with a newly constructed 60 kV transmission line which will in turn connect the proposed plant to PGandE's Coburn Substation, approximately 3.2 miles away. At that point, power supplied by the project will be integrated into the PGandE 230 kV system (Dec. 3, 1986 RT 69, 82, 85).

The American 1-Coburn transmission line will utilize 60 kV, the industry-wide accepted voltage for transmitting 120 MW over the relatively short distance of 3.2 miles. Coburn Substation, due to its proximity, is superior to other potential terminations (Dec. 3, 1986 RT 70-71, 85). Two-bundle 1,431 kCM aluminum conductor will be used (Dec. 3, 1986 RT 69, 82).

While there are no applicable laws, regulations, or ordinances pertaining to the topic area, Staff used accepted industry standards to evaluate the transmission system impacts of the project. Accepted industry performance objectives/criteria address the normal and emergency loading of transmission components, substation voltages, system protection, and energy losses (Dec. 3, 1986 RT 81).

Studies establish that power flows are substantially below the line ratings for normal service during peak load periods, and for 1988 summer peak

load emergency conditions. During a 1993 summer peak load emergency condition (the outage of either the Panoche or the Moss Landing lines), the loading of the functioning line is either equal to or slightly above the emergency rating and is at least marginally acceptable (Dec. 3, 1986 RT 71, 72, 97).

According to industry performance objectives/criteria, voltages should stay within ±5 percent of the rated value. Load flow analyses show the 60 kV voltage at Coburn Substation to be 7 percent above the 60 kV rated value; however, because the American 1 generator step-up transformer is rated 63 kV and the insulation level of equipment purchased for the system is of the 69 kV class, no equipment will be exposed to voltages in excess of rated voltage plus 5 percent (Dec. 3, 1986 RT 72, 99).

The most severe short circuit which must be interrupted by the 60 kV circuit breakers at Coburn Substation is 1,317 MVA. The proposed circuit breaker has an interrupting rating of 3,500 MVA and is therefore adequate. The addition of American 1 would thus create short circuit magnitudes well below equipment ratings, and would have only an insignificant affect on PGandE's 230 kV system (Dec. 3, 1986 RT 72, 99-100).

Energy losses on the PGandE system caused by the operation of American 1 will be approximately 677 kW, or 0.6 percent of the delivered power; the witnesses consider this level to be insignificant (Dec. 3, 1986 RT 72, 100).

The evidence of record thus demonstrates that, with implementation of the Conditions of Certification below, the proposed transmission line will comply with industry performance criteria/objectives (Dec. 3, RT 75, 103; Exhibit 19).

FINDINGS

Based upon the evidence of record, the Commission finds:

1. The proposed interconnection is acceptable.

2. Operation of the American 1 Cogeneration plant will have no significant adverse impacts on the PGandE system beyond the Coburn Substation.

3. The magnitude of system losses that will occur due to operation of the American 1 Cogeneration plant is insignificant.

4. Transmission component loading will be acceptable for normal and peak service.

5. Under normal operating conditions during normal and peak loading, no equipment will be overstressed due to excessive voltages.

6. There are no unreasonable, adverse impacts on the utility's system for all credible single contingency/emergency/N-1 conditions at peak loading.

7. All circuit breakers in the affected area of the PGandE system are capable of interrupting expected short circuit currents.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall verify that Pacific Gas and Electric Company (PGandE) will accomplish the following:

   a. Install a terminal position at Coburn Substation with at least a 3,500 MVA 60 kV circuit breaker.

   b. Install interchange metering at the American 1 switchyard.

   c. Install and/or modify protection and communication facilities to accommodate the American 1 Cogeneration Plant.

   d. Place the power output and the voltage of the American 1 Cogeneration Plant under the control of PGandE.

   Verification: No later than 60 days prior to commencing transmission facility construction, Basic shall furnish the California Energy Commission (CEC) Compliance Project Manager with the pertinent portion of the Basic/PGandE Contract for implementation of this Condition or a statement signed by the responsible PGandE representative that these requirements will be implemented.

2. Basic shall request on behalf of PGandE and must receive authorization from the CEC for any variance from Condition 1 before implementing any

significant changes in the PGandE system which may affect the performance of the transmission system related to the American 1 project.

Verification: Basic shall transmit to the CEC Staff PGandE's request for any variance from these Conditions to justify such changes and receive the CEC's concurrence (amendment) to implement such changes.

3. Upon completion of construction, Basic shall furnish proof that the transmission facilities have been constructed and operational procedures implemented in accordance with Conditions 1 and 2.

Verification: Within 60 days following first successful synchronization of one or two of the project's generators with the PGandE system, Basic shall transmit relevant documentation such as engineering descriptions, one-line diagrams, "as-built" drawings, etc., generated by PGandE and signed by a registered professional engineer licensed to practice electrical engineering in the State of California, with all amendments attached, attesting to the conformance with Conditions 1 and 2.

Basic shall concurrently submit to the CEC Compliance Project Manager an itemization of all additions, modifications, upgrades, and replacements of transmission facilities made to connect the American 1 Cogeneration Project to the PGandE system. This includes those partially attributable to the American 1 cogeneration facilities with costs, and the allocation of costs to Basic and/or PGandE, associated with each item. This shall be accomplished within the 60 days following first successful synchronization of one or two of Basic's generators with the PGandE system.

PART FOUR: RELIABILITY AND SAFETY

Public Resources Code sections 25523(a) and (d) require the Commission to determine whether a proposed facility will meet applicable reliability and safety standards. The following topic areas address whether the American 1 Project will be a reliable generation source and whether its construction and operation would pose unacceptable risks to public health and safety.

A. Reliability

The purpose of this review is to assess the adequacy of equipment redundancy, quality control, fuel and water supply, and seismic risk to assure the proposed project will operate at its expected availability factor. Applicant's objective is to operate at an expected overall plant availability of 93.2 percent; Staff, however believes the overall plant availability factor will be 89 percent.[79] In order to achieve the predicted availability, Applicant proposes the use of redundant equipment. The proposed design shows sufficient redundancy of major as well as auxiliary equipment, in both number and capacity, to achieve the stated reliability goals (Dec. 3, 1986 RT 289, 304-06, 313).

The quality surveillance plan appears capable of assuring quality control requirements will be met and work will be performed as specified. This plan addresses vendor selection, vendor quality control, specifications conformity,

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79. The difference in availability factors is attributable to the data used in predicting the mechanical reliability of the equipment (Dec. 3, 1986 RT 293).

and warranty provisions. The ultimate quality surveillance level will be finalized during the design and procurement activities and will be based upon the relative importance, complexity, and function of each piece of equipment (Dec. 3 RT 289, 301-302, 307, 313).

The proposed project will be fueled primarily by natural gas supplied by PGandE, supplemented by a fuel oil back-up system designed with 1.5 day storage capacity and adequate pumping redundancy. In case of an emergency, additional fuel oil can be secured from local suppliers on 12-hours notice. Based upon PGandE's history of service, the projections for gas fuel availability, and the back-up fuel oil system, the fuel supply system appears adequate to assure reliable plant operation (Dec. 3, 1986 RT 289, 302, 307-308).

When operating, the proposed plant will require from 800,000 gallons per day (gpd) to 1.2 million gpd of water. These quantities will be supplied by two new wells. Each of the two wells will yield approximately 1 million gpd, a quantity sufficient to supply the cogeneration plant and the auxiliary boilers for the life of the project (Dec. 3, 1986 RT 289, 302-303).

Applicant originally proposed to design the facility to meet Uniform Building Code safety requirements based upon peak ground acceleration (PGA) of .14 g. This design creates a risk of 46 percent probability of exceedance during the expected economic plant life of 30 years. Acting on Staff's recommendation, Applicant has upgraded the seismic design to withstand a .25 PGA event, which reduces the probability of exceedance to 15 percent. This reduces the plant's vulnerability to damage and hence increases its reliability (Dec. 3, 1986 RT 289-290, 303, 308, 310).

With the implementation of the Conditions of Certification below, the proposed cogeneration project will be designed consistent with stated reliability goals (Dec. 3, 1986 RT 294, 295; Exhibit 21).

FINDING

Based upon the evidence of record, the Commission finds:

1. The system design, equipment, seismic risk, fuel and water supplies, and quality control plans are adequate to provide reasonable assurance the American 1 Project will operate in an acceptably reliable manner.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall inform the California Energy Commission (CEC) of any design changes made subsequent to certification by the Commission, whether made during final design or construction, which would affect the project's availability or capacity factors.

   Verification: Basic shall submit the proposed change to the CEC at least 30 days prior to instituting such change with rationale, supporting design, and analytical documentation justifying these changes.

2. Basic shall prepare a report documenting discovered non-conformances and corrective actions taken during start-up, containing the following:

   a. Identification of any nonconformity which requires a corrective action;

   b. Description of the corrective action taken and hours needed to resolve the problem;

   c. Identification of problems or technical circumstances which resulted in interruption of a given start-up activity; and

   d. Description of corrective action taken and hours needed to resume the start-up activity.

   Verification: Within 60 days following completion of the checkout and start-up operations, Basic shall file with the CEC Compliance Project Manager a report containing the above information covering the period from the first turbine roll through the first invoicing of electricity sales.

3. Basic shall prepare an annual report documenting the plant availability and capacity factors achieved, supported by the following information:

   a. Operating hours, outage hours, cause of outage and downtime for each piece of major equipment including the following:

      - Combustion turbine/generators
      - Heat recovery steam generators
      - Feedwater pumps
      - Steam turbine/generators
      - Condensers
      - Condensate pumps
      - Cooling water pumps
      - Controls

   b. For each forced outage, a precise identification of the equipment whose failure resulted in the forced outage and the resulting forced outage hours.

   c. Identification of equipment or other causes (such as curtailment) for which planned outage was instituted in any given month.

   d. Annual plant availability and capacity factors, per EPRI definitions.

   Verification: Ninety days following each anniversary of the start of commercial operation, Basic shall file with the CEC Compliance Project Manager an annual report containing the above information.

4. Basic shall demonstrate on a sample basis implementation of the Quality Control (QC) program.

   Verification: Thirty (30) days prior to issuance for bid or, if presently available, Basic shall submit to the CEC's Compliance Project Manager two copies of the request for quotations containing engineering specifications, QC provisions and requirements for the feedwater pumps and the heat recovery steam generator (HRSG).

   Ten (10) days after the purchase orders for the feedwater pumps and the HRSG have been executed, Basic shall submit to the CEC's Compliance Project Manager two copies of the purchase orders or that portion of the purchase orders containing the engineering specifications, QC provisions, and means of verification of these requirements.

5. Before commercial operation, Basic shall install at the project site a strong motion triaxial accelerometer and continuously record the ground shaking motion. This equipment shall be installed, calibrated, and maintained in coordination with the State of California Department of Conservation, Division of Mines and Geology Strong Motion Instrumentation Program. Acceleration records shall be available to the CEC staff upon request.

   Verification: Basic shall provide the CEC Compliance Project Manager written certification that the accelerometer has been installed in accordance with the above Condition.

B. Public Health

The construction and operation of the proposed project presents several public health concerns. These include the generation of, and exposure to, air pollutant emissions from the cooling tower drift and from the combustion of natural gas and fuel oil, as well as ammonia emissions from the Selective Catalytic Reduction (SCR) system. The project will also create electromagnetic fields and hazardous materials and wastes.

Most of the emissions associated with the combustion of natural gas are criteria (regulated) air pollutants. Of these, according to monitoring data from the Salinas and San Ardo monitoring stations, existing ozone and PM_{10} (particulate matter less than 10 microns) levels approach the relevant ambient air quality standards. Operation of the proposed facility will, under the worst credible conditions, slightly increase the level of PM_{10} in the existing background level (Dec. 3, 1986 RT 395, 405, 407, 411, 416-417) but the levels will not violate the state PM_{10} standard (June 11, 1987 RT 55).

Data show that, due to the emissions of oxides of nitrogen (NO_x) and non-methane hydrocarbons (both of which are precursors to ozone), there may be an insignificant increase in the level of ozone in the area which should not violate ambient air quality standards. However, this conclusion is based on limited information from the Salinas and San Ardo monitoring stations (located 45 and 25 miles, respectively, from the proposed project site). To more accurately assess local conditions, ambient air quality levels in the project area will be monitored (Dec. 3, 1986 RT 395, 412, 416, 417).

Offsets are required for the project-related emissions of oxides of nitrogen (NO_x), sulfur oxides (SO_x), total suspended particulates (TSP), PM_{10}, and carbon monoxide (CO). Applicant will use Selective Catalytic Reduction (SCR) for the control of NO_x, and limit these emissions to a level approximately 40 percent below that permissible under local air district rules (June 11, 1987 RT 96). CO oxidation catalysts will be used to control CO emissions (Dec. 3, 1986 RT 395-396, 421).

Non-criteria pollutants (those for which there are no ambient air quality standards) will also be emitted. Emission levels are not, however, expected to result in any acute or chronic health effects, and no significant adverse health impacts are expected (Dec. 3, 1986 RT 396, 409, 417).

Exposure to ammonia gas may create potential public health impacts. While there is a low probability of exposure to ammonia gas due to failure of the ammonia tank, emissions from ammonia slip (the non-reaction of ammonia with NO_x in the SCR system) could have a significant adverse impact on public health (Dec. 3, 1986 RT 397, 411). This matter is addressed in greater detail in the "Ammonia Safety" subsection, infra.

Electric and magnetic fields produced by the proposed high-voltage transmission line can induce currents in persons nearby; risks to human health are unknown. In order to avoid potential adverse health impacts, the Staff has concluded that maximum electrical field strengths ranging from 1.0 to 1.6 kV/m at the boundaries of 230-765 kV transmission line corridors constitute acceptable parameters. The project's 60 kV transmission line will create a field strength of approximately .09 kV/m, well within this acceptable range (Dec. 3, 1986 RT 398-399, 419).

With the implementation of the Conditions of Certification contained in this Report, the proposed project is expected to comply with applicable standards, ordinances, and laws and will not pose any unacceptable adverse public health risks (Dec. 3, 1986 RT 422; Feb. 23, 1987 RT 99, 101; Exhibit 23).

FINDINGS

Based upon the evidence of record, the Commission finds:

1. The American 1 Project, if constructed and operated in compliance with the Conditions of Certification below and those contained in the "Air Quality" portion of this Decision, will comply with applicable laws, ordinances, regulations and standards reflected in the "Public Health" portion of Appendix A of this Decision.

2. The major potential health concerns resulting from the American 1 Project are due to air pollutant and ammonia emissions.

3. The American 1 Project, if constructed and operated in compliance with the Conditions of Certification below and those contained in the "Air Quality" portion of this Decision, will have no significant adverse affects on public health.

CONDITIONS OF CERTIFICATION

1. Basic American Food Company (Basic) shall cause to be established an ambient monitoring system for ozone, TSP, and PM_{10} in the Salinas Valley, downwind and south of the facility. The monitoring network and monitoring plan shall be consistent with the EPA Quality Assurance Handbook for Air Pollution Measurement Systems, Volumes I and II (EPA 1976) and District Rules. This monitoring shall be conducted for the life of the project or until CEC staff deems that such monitoring is no longer necessary.

   Verification: Ninety (90) days prior to initial startup of the facility, Basic shall submit a monitoring plan to the MBUAPCD and CEC staff that will include, at a minimum, the following information: the location of the monitoring site, the type and specifications of ozones, TSP, and PM_{10} sampler, the frequency of sampling, and the individuals and/or company (subcontractor) who will be responsible for the collection of data. Within 30 days of receipt of the sampling plan, the CEC staff will notify Basic of the acceptability of the plan.

Upon commencement of operation of the ozone, TSP, and PM_{10} ambient monitoring station, Basic shall cause quarterly reports to be submitted to the CEC, and forward copies to the CARB and to the MBUAPCD. Every ozone, TSP, and PM_{10} sample recorded will be included in the quarterly reports. Background conditions (temperature, pressure, humidity, wind speed and direction) shall also be included.

2. Basic shall limit ammonia emission due to ammonia slip in the NO_x reduction process to no greater than 10 parts of ammonia per 1 million parts of flue gas.

Verification: The terms of this Condition shall be monitored and reported as specified in the verification for Air Quality Condition of Certification 13.

C. Ammonia Safety

The American 1 Cogeneration project requires a selective catalytic reduction system (SCR) to reduce emissions of nitrogen oxides (NO_x); this system, in turn, requires an ammonia injection system. Ammonia is a toxic chemical, as well as a flammable gas, which can cause severe respiratory injuries or result in fire hazards. This topic addresses the effects of the storage and use of ammonia on public and worker safety.

Ammonia will be stored in a pressurized tank located in a diked area away from other chemicals, combustible materials, buildings and equipment. Appropriate signs will be posted in accordance with applicable law. A detection system will monitor ammonia leaks. In the event ammonia gas is released, the system will sound an alarm and, if necessary, the area will be sprayed with water to absorb vapors and reduce the concentration of ammonia (Nov. 24, 1986 RT 55, 66-67, 75).

The evidence delineates various scenarios resulting in potential risks to the public. Spills constitute a potential danger during the transfer of ammonia from the delivery truck to the storage tank, from the tank to the SCR ammonia injection skid, or (in a "worst-case" scenario) due to failure of the storage tank. In order to guard against spills, Applicant will develop an operator training program and will design, fabricate, install, and periodically inspect the equipment in accordance with applicable standards, ordinances, and laws (Nov. 24, 1986 RT 56, 68-69, 73). In the event of a spill during transfer of ammonia from delivery truck to the storage tank the safety devices required by law, such as excess flow valves, will limit the

maximum amount of ammonia spilled. In the unlikely ("worst-case") event of the release of 6000 gallons of anhydrous ammonia due to failure of the storage tank, the public would be exposed to a dangerous environment and could require evacuation. Applicant will therefore develop an evacuation plan in coordination with local emergency agencies to minimize public exposure and reduce the accompanying danger (Nov. 24, 1986 RT 57, 71). Accidental release could also occur during transfer from the storage tank to the SCR ammonia injection skid. Under such conditions, the maximum release would be approximately 14.2 cubic feet of liquid ammonia (Nov. 24, 1986 RT 69). The evidence indicates that compliance with applicable laws will minimize the possibility of these occurrences.

Applicant has developed a comprehensive fire protection system which, pending approval from the King City Fire Department, will adequately protect workers and the public from ammonia hazards due to fire and explosion (Nov. 24, 1986 RT 57, 76, 78). Applicant's proposed accident prevention program, health and safety program, worker training program, emergency response plans, and spill control plans, if implemented in accordance with applicable standards, ordinances, and laws, will also ensure safe ammonia handling and storage (Nov. 24, 1986 RT 57-58, 77, 79).

With the implementation of the Conditions of Certification below, the proposed measures and safety programs and will adequately protect plant personnel and the general public from ammonia-related hazards (Nov. 24, 1986 RT 78-79; Exhibit 16).

FINDINGS

Based upon the evidence of record, the Commission finds:

1. With the implementation of the Conditions of Certification below, the proposed project will adequately protect plant personnel and the public against the hazards associated with the use of ammonia.

2. With the implementation of the Conditions of Certification below, the proposed project will comply with the applicable laws, ordinances, regulations, and standards identified in the "Ammonia Safety" portion of Appendix A of this Decision.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall comply with storage and handling requirements of anhydrous ammonia as specified in Title 29, CFR, Section 1910.111; Title 8, CAC, Chapter 4, Subchapter 1, Article 6, and ANSI K61.1-1981.

   Verification: Basic shall submit a letter to the CEC staff signed by the CBO verifying compliance with the regulations within 30 days prior to the first filling of the ammonia storage tank (first fill).

2. Basic shall ensure that the anhydrous ammonia storage tank is designed and fabricated in accordance with ASME Section VIII and is anchored in accordance with the requirements of ACI 349-80, Appendix B. (The Structural Engineering Conditions, supra, contain further requirements regarding anchorage of such tank.)

   Verification: Basic shall submit a letter to the CEC staff stating that copies of all back-up material were sent to the CBO, certified by the manufacturer, and verify compliance with the referenced standards 30 days prior to first fill. Backup material must include certified code papers with results of all non-destructive examination (NDE). This backup material shall be kept on file and available to the CEC staff and Cal/OSHA upon request.

3. Basic shall contract only with Department of Transportation (DOT) licensed haulers for the transport of anhydrous ammonia.

   Verification: Basic shall submit a letter to the CEC staff, signed by the plant superintendent, verifying that Basic is contracting with DOT licensed haulers for the transport of anhydrous ammonia.

4. Basic shall comply with the following sections of Title 8, CAC, Chapter 4:

   - Subchapter 7, Article 107 - Dust, Fumes, Mists, Vapors and Gases

   - Subchapter 7, Article 109 - Hot, Flammable, Poisonous, Corrosive and Irritant Substances

- Subchapter 7, Article 145 - Design, Construction and Installation of Venting, Diking, Valving and Supports

- Subchapter 7, Section 3203 - Operation; Accident Prevention Program

- Subchapter 7, Group 20, Articles 134 to 146 - Flammable Liquids, Gases and Vapors

- Subchapter 7, Group 27, Articles 156 to 163 - Fire Protection

Verification: Basic shall submit a letter to the CEC staff, signed by the CBO, verifying compliance with the regulations within 30 days prior to first fill.

5. Basic shall comply with the requirements of Title 22, CAC, Chapter 3, Article 11, Classification of Containers of Hazardous Chemicals.

   Verification: Basic shall submit a letter to the CEC staff signed by the CBO verifying compliance with the requirements within 30 days prior to first fill.

6. Basic shall submit applicable documents to the King City Fire Department (KCFD) requesting their review of the fire protection systems for conformance with applicable sections of the following (NFPA) standards:

   - NFPA 10 - Portable Fire Extinguishers
   - NFPA 13 - Standard for the Installation of Sprinkler Systems
   - NFPA 15 - Water Spray Fixed System
   - NFPA 26 - Standard for Supervision of Valves
   - NFPA 30 - Flammable and Combustible Liquids Code
   - NFPA 70 - National Electric Code
   - NFPA/NEC - Class I, Division II, Group D Hazardous Area Designation

   Verification: Basic shall submit to the CEC a copy of a statement signed by the KCFD 30 days prior to first fill stating that the ammonia fire protection system is in compliance with the above codes.

7. Basic shall develop a major accidental ammonia release evacuation plan coordinated with KCFD, local medical facilities, the city police department, and the county sheriff's department.

   Verification. Basic shall submit to the CEC staff a copy of the plan signed by a representative from each of the above groups 30 days prior to first fill.

8. Basic shall prepare and implement an ammonia release accident prevention program and shall request that the Cal/OSHA Consultation Service review the program.

Verification: Basic shall request a letter from the Cal/OSHA Consultation Service certifying compliance with the requirements of Title 8, CAC, Chapter 4, Subchapter 4, Section 1509, and Subchapter 7, Section 3203. A copy of the letter shall be filed by Basic with the CEC staff prior to commencing site preparation.

9. Basic shall facilitate on-site worker safety inspections conducted by the California Division of Occupational Safety and Health (Cal/DOSH) during construction and operation of the facility when an employee complaint has been received.

   Verification: Basic shall request Cal/DOSH to notify the CEC staff in writing in the event of a violation that will involve Cal/DOSH action affecting the construction and operation schedule and shall notify the CEC staff of the necessary corrective action. Basic shall note any Cal/DOSH inspections and actions in its periodic compliance reports.

D. Safety

This topical review addresses the adequacy of project safety programs, fire prevention capability, and measures for handling hazardous substances to protect public and worker safety during construction and operation of the proposed project.

Handling, storing, transporting, and disposing of hazardous materials will comply with applicable laws, ordinances, regulations, standards and general industrial safety practices. Chemical storage areas will be identified as hazardous or non-hazardous areas, and will be designed to drain into holding basins to collect spills and waste (Nov. 24, 1986 RT 19-20, 33-34, 39). Foundations and slabs for equipment containing hazardous materials will also be designed to contain spills (Nov. 24, 1986 RT 20, 39). Personnel involved in handling hazardous materials will be trained in procedures and safety precautions for both normal and emergency situations (Nov. 24, 1986 RT 21, 33-34).

Fire safety will be provided with a fire protection system constructed, maintained, and operated in accordance with applicable standards, ordinances, and laws, and staffed by trained personnel. The system will be triggered by automatic fire detectors and will include fixed automatic water extinguishing systems, dry chemicals, Halon 1301 and 1211 extinguishing systems, a fixed manual protection system, standpipes and hose stations, yard hydrants, hose houses, portable fire extinguishers, and smoke detection systems. The electric pump supplying fire water will be supplemented by a diesel fuel pump (Nov. 24, 1986 RT 21, 40). The fire protection system will be augmented by

the King City Volunteer Fire Department (KCFD) which can respond in 4 to 6 minutes with 3 pumper trucks, each with a 5 person crew. Monterey County and the California Forestry Department can supplement the KCFD (Nov. 24, 1986 RT 22, 30). Applicant will also develop and implement an accident prevention program and worker safety program which will be reviewed and enforced by Cal/OSHA (Nov. 24, 1986 RT 23, 41-42).

With the implementation of the Conditions of Certification below, the proposed measures and safety programs will adequately protect plant personnel and the general public from the (non-ammonia) safety-related hazards associated with the construction and operation of the American 1 project (Nov. 24, 1986 RT 21, 23, 43; Exhibit 17).

FINDINGS

Based upon the evidence of record, the Commission finds:

1. The proposed project, if constructed and operated in accordance with the Conditions of Certification, will not create unreasonable safety hazards to the public or to project workers.

2. The proposed project, if constructed and operated in accordance with the Conditions of Certification, will comply with the standards, ordinances, regulations, and laws listed in the "Safety" portion of Appendix A of this Decision.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall submit its fire protection program for the construction of the proposed facility to the King City Fire Department (KCFD) for approval 45 days prior to scheduled start of construction.

   Verification: Prior to start of construction, Basic shall submit to the CEC staff a copy of the King City Fire Department's written acceptance of Basic's fire protection program for the construction phase of the proposed facility.

2. Basic shall comply with storage and handling requirements for sulfuric acid as specified in Title 8, CAC, Chapter 4, Subchapter 7, Article 109.

   Verification: Basic shall submit a letter to the CEC staff, signed by the Chief Building Inspector (CBO), verifying compliance with the regulations within 30 days prior to first fill.

3. Basic shall ensure that the sulfuric acid and sodium hydroxide storage tanks are designed and fabricated in accordance with ASME Sections VIII, cyclohexylamine per Section X, and anchored in accordance with ACI 349-80, Appendix B.

   Verification: Basic shall submit a letter to the CEC staff accompanied by copies of all back-up material sent to CBO, certified by the manufacturer, verifying compliance with the referenced standards 30 days prior to first fill.

4. Basic shall comply with the handling and storage procedures of fuel oil, lube oils, sodium hypochlorite, sodium sulfite, sodium hydroxide, and sulfuric acid as specified in CAC, Title 8, Chapter 4, Subchapter 7.

   Verification: Basic shall submit a letter to the CEC staff, signed by the KCFD, verifying compliance 30 days prior to first fill.

5. Basic shall submit its fire protection program for the operation of the proposed facility to the King City Fire Department.

   Verification: Basic shall submit to the CEC staff a copy of the KCFD's written acceptance of Basic's operational fire protection program for the proposed facility 45 days prior to the first turbine roll.

6. Basic shall submit applicable documents to the KCFD requesting their review of the onsite fire protection system for conformance with applicable codes: NFPA Standards 10, 12, 12A, 12B, 13, 14, 15, 17, 20, 24, 26, 30, 37-1979, 54-1, 70, 72E, 214, 496, 1961, 1962, and 1963; PRC, section 4291; Title 49 CFR (fuel oil transport and CO_2 transport), Title 22, CAC, Chapter 3, Article 11, and applicable AGA standards.

   Verification: Thirty days prior to the first turbine roll, Basic shall submit to the CEC staff a statement, signed by the KCFD, verifying conformance with the above standards.

7. Basic and KCFD shall annually re-examine the fire protection program.

   Verification: Basic shall note and summarize the results of the joint reexamination of the fire protection program in its periodic annual compliance report to the CEC staff.

8. Basic shall prepare and implement an accident prevention program and shall request that the Cal/OSHA Consultation Service review Basic's program to determine if it complies with Title 8, CAC, sections 1509 and 3203.

Verification: Basic shall request a letter from the Cal/OSHA Consultation Service certifying compliance with the requirements of Title 8, CAC, Chapter 4, Subchapter 4, Section 1509, and Subchapter 7, section 3203. A copy of the letter shall be filed by Basic with the CEC staff prior to commencing site preparation.

9. Basic shall facilitate onsite worker safety inspections conducted by the California Division of Occupational Safety and Health (Cal/DOSH) during construction and operation of the facility when an employee complaint has been received.

   Verification: Basic shall request Cal/DOSH to notify the CEC staff in writing in the event of a violation that will involve Cal/DOSH action affecting the construction and operation schedule and shall notify the CEC staff of the necessary corrective action. Basic shall note any Cal/DOSH inspections and actions in its periodic compliance reports.

10. Basic shall comply with Chapters 5, 19, 32, 33 of the Uniform Building Code (UBC) (Jan. 1986).

    Verification: Basic shall submit a letter to the CEC staff, signed by the CBO, verifying compliance 30 days prior to the first turbine roll.

11. Basic shall comply with ACI 349-80, Appendix B, API 650, ASME Sections VIII and X in constructing tanks and pressure vessels.

    Verification: Basic shall submit a letter to the CEC staff, signed by the CBO, verifying compliance with the referenced standards 30 days prior to the first turbine roll.

12. Basic shall contract only with Department of Transportation licensed haulers for the transport of hazardous materials.

    Verification: Basic shall submit a letter to the CEC staff, signed by the plant superintendent, verifying that Basic is contracting with licensed haulers for the transport of hazardous materials.

E. Transmission Line Safety And Nuisance

Transmission line safety and nuisance concerns include aviation and fire hazards, interference with communication systems, audible noise, and hazard and nuisance shocks caused by the transmission line's structures or operation.

The proposed transmission line will carry 60 kV and run approximately 3.2 miles from the project facility to the PGandE Coburn Substation[80] (Nov. 5, 1986 RT 230, 241). Poles will range from 55 to 65 feet in height, and will be located approximately 1/2 mile from the King City Airport northeast of the project site. Based on these specifications, the transmission line will not constitute an aviation hazard (Nov. 5, 1986 RT 230, 243-244).

Interference caused by the operation of the transmission line is expected to be minimal since no communications facilities are nearby. However, the operation of the line could interfere with Southern Pacific Transportation Company (SPTC) railway signal circuits. During the November 5, 1986 hearing, Applicant and Staff submitted proposed Conditions of Certification designed to insure that Basic would be responsible for mitigating any interference with the SPTC circuits (Nov. 5, 1986 RT 231, 232, 245). By letter of March 2, 1987, however, SPTC suggested certain alternative language. In order to provide the parties the opportunity to assess this alternative language, the Committee included SPTC's proposal as proposed Conditions A-10 and A-11 at page 126 of its "Presiding Member's Report".

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80. This discussion refers to the preferred alternative transmission line route (Route 1; Nov. 5, 1986 RT 228).

The parties addressed these and other pertinent Conditions at the June 11, 1987 Committee hearing. SPTC did not participate or formally comment. Testimony from both Applicant and Staff indicated, however, that signal circuit interference had been discussed with SPTC and that adoption of a Condition proposed by Applicant would ensure SPTC's concerns were met (June 11, 1987 RT 8-10). Condition 5, below, reflects this language, and replaces Conditions 5, 9, A-10, and A-11 appearing at pages 125-6 of the PMR.

The potential for creating fire hazards, nuisance shocks (caused by contact with ungrounded metal objects in or near the transmission line right-of-way), and hazard shocks (caused by direct contact with the transmission line conductor) will be minimized by complying with the Conditions of Certification below (Nov. 5, 1986 RT 232-233, 245-246, 247). Noise generated during operation of the transmission line will be below audible levels, and will comply with the noise element of the Monterey County General Plan (Nov. 5, 1986 RT 233, 246-247).

With the implementation of the Conditions set forth below, the proposed transmission line will cause no significant impacts due to aviation or fire hazards, hazard or nuisance shocks, communications interference, or operational noise (Nov. 5, 1986 RT 230-33, 236; Exhibit 9).

FINDINGS

Based on the evidence of record, the Commission finds:

1. With the implementation of the Conditions of Certification, the transmission line will comply with applicable laws, ordinances, regulations, and standards identified in the "Transmission Line Safety and Nuisance" portion of Appendix A of this Decision.

2. With the implementation of the Conditions of Certification, the operation of the transmission line will cause no significant safety or nuisance impacts.

3. The Southern Pacific Transportation Company did not formally comment upon proposed Conditions A-10 or A-11 contained at page 126 of the "Presiding Member's Report".

CONDITIONS OF CERTIFICATION

1. Basic American Foods Company (Basic) shall request PGandE to design, construct, operate, and maintain the transmission line in accordance with the applicable standards, ordinances, and laws. Basic shall request PGandE to inspect the transmission line annually to ensure compliance with applicable standards, ordinances, and laws.

   Verification: Basic shall request PGandE to provide the CBO with applicable documents and shall submit to the CEC staff a statement from PGandE's responsible electrical engineer, registered in the State of California, indicating that the transmission line has been constructed in accordance with GO-95, GO-52, and Title CAC, Section 2940 et seq. and that it will be inspected annually by PGandE. The statement shall be submitted within 90 days after the completion of the transmission line.

2. Before energizing the transmission line, Basic shall request that PGandE ensure all ungrounded metallic fences, gates or other large permanent metallic objects within the right-of-way, regardless of ownership or location, are grounded.

   In the event that the owner (other than PGandE) of the metallic item objects to its being grounded, Basic shall notify the CEC staff and, as a result, is released from this requirement.

   Verification: Within 60 days after the completion of the transmission line construction, Basic shall file a statement with the CEC Compliance Project Manager verifying compliance with the grounding procedures defined in the NESC and NEC. If a landowner has objections to the grounding, Basic shall include a written statement from the landowner to that effect, if obtainable.

3. In the event of complaints regarding induced current from vehicles, portable objects, large metallic roofs, fences, gutters, or other objects in the right-of-way, Basic shall request PGandE to investigate and take all reasonable measures, at Basic's expense, to correct the problems arising from valid complaints.

   For objects constructed, installed, or otherwise placed within the right-of-way after acquisition, Basic shall request PGandE to ground, at Basic's expense, the objects within the right-of-way upon request, normally within a week of such request. Notification to PGandE of the need to ground is the responsibility of the property owner. Basic shall advise the property owners of the responsibility, in writing, prior to the signing of the right-of-way agreement. Basic shall request PGandE to

advise the property owners, in writing at the time the right-of-way agreement is signed, that the refueling of vehicles or equipment under the transmission line is not recommended.

Verification: Basic shall request PGandE to maintain a record of activities related to this requirement. Upon reasonable notice, these records shall be made available by Basic and, upon request to PGandE, to authorized CEC staff.

4. Basic shall request PGandE to make every reasonable effort to locate and correct, on a case-by-case basis, all causes of radio and television interference attributed to the transmission line facilities including, if necessary, modifying receivers and furnishing and installing antennas.

   Verification: Basic shall request PGandE to maintain records of complaints and corrective actions and shall, upon reasonable notice, make these records available to authorized CEC staff. All complaints are to be recorded by PGandE with explicit notations of the corrective actions performed. Complaints which did not result in corrective action shall be defined and justified by PGandE. The records shall be signed by the authorized owner's representative and also by the complainant to indicate the concurrence with the corrective action or justification of no corrective action.

5. Basic shall ensure that operation of the project's transmission line does not interfere with the safe operation of Southern Pacific Transportation Company's (SPTC) railway signal circuits.

   Verification: No less than 60 days prior to the initial energization of the project's transmission line Basic shall submit to the CEC staff documentation of agreement among Basic, PGandE and SPTC as to criteria, test procedures and mitigations to ensure that operation of the project's transmission line does not interfere with the safe operation of SPTC's railway signal circuits.

6. Basic shall request PGandE to keep each transmission line pole site free of waste material, rubbish, and vegetation as required by regulations.

   Verification: Basic shall submit to the CEC staff, at least once a year, a record of the PGandE inspection and clean-up report(s) of the fire prevention activities around the transmission line poles.

7. Basic shall request PGandE to file a "Notice of Construction or Alteration" form with the Federal Aviation Administration (FAA) 30 days before construction begins if a transmission line tower or any other appurtenance will be more than 200 feet above the average ground level in the vicinity of the site or if a tower penetrates an imaginary surface (20:1) of any civil use airport.

   Verification: Basic shall forward a copy of the filing and FAA approval to the CEC staff within 15 days of FAA approval.

8. Basic shall request an aeronautical study be performed by the FAA to determine if obstruction marking is required near the airport. If the

study finds obstruction marking is required Basic shall install, at its own expense, the obstruction marking recommended by the study.

Verification: Basic shall forward a copy of the study request, FAA acknowledgment, and the study to the CEC staff within 15 days of mailing or receiving each item.

F. Waste Management

Hazardous and non-hazardous wastes will be generated during the construction and operational phases of the proposed project. Potential adverse impacts can be mitigated through adequate treatment and disposal practices.

During the construction of the proposed project, the amount of hazardous waste generated will be insignificant. Any such waste will be disposed at a Class I facility, such as the Kettleman Hills site (about 100 miles away). The bulk of the waste arising during construction will be non-hazardous and will be disposed at a Class III facility such as the nearby Jolon Road landfill, which is currently operating substantially below capacity (Nov. 5, 1986 RT 271, 286).

During operation of the project, several categories of waste will be generated. The cogeneration facility will create 332,000 gallons per day (gpd) of wastewater (from cooling tower and boiler blowdown) during the food processing season, and 326,000 gpd during the off-season. After reusing this wastewater as vegetable wastewater in the food processing plant, it will be discharged to the King City industrial sewer system. Eventually, the wastewater will be sprayed on land where the organic vegetable matter in the wastewater will decay (Nov. 5, 1986 RT 271, 287).

Sanitary wastewater (about 100-200 gpd) will also result. Until the King City sanitary sewer system is installed in the adjacent industrial area, this will be disposed via a septic tank system. Project wastewater will eventually

discharge into the King City sewer system, where it will comprise about .02 percent of the system capacity. No significant impact from this discharge is expected (Nov. 5, 1986 RT 271, 287).

Periodic cleaning of the boiler and heat recovery steam generator will occur every 2-3 years, resulting in a variety of wastes. A licensed boiler chemical cleaning subcontractor will remove such wastes for suitable disposal (Nov. 5, 1986 RT 272, 287-88). Sludge from the accumulation of dust and debris in the cooling tower will be vacuumed by a licensed subcontractor and disposed offsite (Nov. 5, 1986 RT 272, 288).

Selective catalytic reduction used for NO_x control will generate spent catalyst. This hazardous waste will be recycled by the manufacturer if possible, or will be sent to a hazardous waste disposal facility (Nov. 5, 1986 RT 273, 288). Cyclohexylamine will be purchased in returnable containers if possible; otherwise Basic will dispose of the empty containers as a hazardous waste (Nov. 5, 1986 RT 273). In order to minimize the impact from accidental spills, foundations and slabs for equipment containing hazardous materials and the storage area for hazardous materials will be designed to provide adequate containment (Nov. 5, 1986 RT 272-273).

With the implementation of the Conditions below, the waste generated by construction and operation of the proposed project will be disposed in compliance with applicable waste management procedures, and the potential for environmental impacts will be minimized (Nov. 5, 1986 RT 291; Exhibit 10).

FINDINGS

Based upon the evidence of record, the Commission finds:

1. With the implementation of the Conditions of Certification, the proposed project will be in compliance with the applicable laws, ordinances, regulations, and standards identified in "Waste Management" portion of Appendix A of this Decision.

2. With the implementation of the Conditions of Certification, the potential for adverse environmental impacts from hazardous and non-hazardous wastes generated by the proposed project will be adequately minimized.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall collect and dispose of, and/or require its subcontractors to collect and dispose of, all non-hazardous construction-related wastes in an approved landfill.

   Verification: At least 30 days before beginning construction, Basic shall submit a letter to the CEC staff listing the waste disposal site(s) to be used for disposal of non-hazardous wastes. Basic shall also provide a copy of its contract which will include provisions for compliance with the waste management laws and regulations designed to protect public health and the environment.

2. Basic shall either dispose of periodic operational wastes (boiler cleaning wastes, boiler blowdown, spent resins, cooling tower mud and spent catalyst) in a Class I landfill or obtain approval from the Regional Water Quality Control Board (RWQCB) that such waste can be otherwise legally disposed.

   Verification: Basic shall submit a letter to the CEC staff which includes documentation that these periodic operational wastes will be disposed in accordance with the requirements of the Regional Water Quality Control Board.

3. If hazardous waste is generated during operation of the facility, Basic shall obtain either a hazardous waste generator permit or a waiver from the California Department of Health Services (DHS).

   Verification: Basic shall submit to the CEC staff a copy of the permit or conditions of the waiver for hazardous waste generator from DHS.

4. If Basic stores hazardous wastes on-site for more than 90 days, it shall obtain a determination from DHS that the requirements for storing hazardous waste at the facility have been satisfied.

   Verification: If Basic has applied for or obtained the appropriate approval required of all hazardous waste facilities, Basic shall notify the CEC staff in the Annual Compliance Report.

5. Basic shall use only licensed hazardous waste haulers for transporting hazardous wastes. All hazardous waste shall be disposed in a site classified for hazardous wastes (as required by DHS, and the RWQCB, Central Coast Region).

   Verification: In the Annual Compliance Report, Basic shall submit a copy of the manifest system designed for keeping a record of the treatment and disposal of all hazardous wastes generated by Basic.

6. Basic shall use a sanitary waste hauler (licensed by the Monterey County Health Department) to dispose of sanitary waste from portable toilets.

   Verification: Prior to site preparation, Basic shall submit to the CEC staff the name and permit number of the sanitary waste hauler it intends to use for disposal of sanitary wastes from portable toilets.

7. Basic shall notify the CEC staff of any waste-related enforcement action taken against Basic during site preparation, construction, or operation of the cogeneration plant.

   Verification: Basic shall notify the CEC staff, within 10 days of notification by any enforcement agency, of impending waste-related enforcement action(s).

8. Basic shall prepare a final waste disposal plan for all the operational wastes that will be produced during the operational life of the proposed cogeneration plant. At a minimum, the waste disposal plan shall specify the:

   a. Waste streams and their classification (e.g., hazardous, designated, and non-hazardous). If applicable, waivers and support documentation for hazardous wastes should be included in the plan;

   b. Manner in which each operational waste will be handled;

   c. Proposed route for hauling the waste to the selected disposal site;

   d. Name, location, and remaining capacity of the proposed disposal site;

   e. Available alternative disposal site(s) as well as a signed agreement to use these sites; and

   f. Contingency plans for operating the cogeneration facility in the event that the proposed hazardous waste disposal sites become unavailable for the disposal of all such project-related wastes.

   Verification: At least ninety (90) days prior to the scheduled start of operation, Basic shall submit the waste disposal plan to the CEC Compliance Project Manager for approval. The Compliance Project Manager will respond no later than thirty (30) days from the date that the disposal plan is submitted. Operation shall not commence until the disposal plan is approved.

9. Basic shall dispose of all containers of cyclohexylamine according to DHS regulations.

   Verification: Before the start of operations, Basic shall submit a determination by DHS as to the hazardous nature of the containers of cyclohexylamine. If determined to be hazardous, Basic shall obtain an EPA identification number as required of all hazardous waste generators (or obtain a waiver through DHS if applicable).

10. If the spent SCR catalyst is not recyclable, Basic shall dispose of the spent catalyst in a permitted Class I landfill facility.

    Verification: At least ninety (90) days prior to the scheduled start of operations, Basic shall submit a letter to the CEC Compliance Project Manager indicating the plan for disposal of the spent catalyst. If the catalysts will be recycled, support documentation should be provided to indicate that the spent catalyst is recyclable by the manufacturer. Otherwise, Basic shall include documentation which indicates the acceptance of the disposal of spent catalyst in a permitted Class I landfill facility.

PART FIVE: ENVIRONMENTAL ANALYSIS

The Warren-Alquist Act and the California Environmental Quality Act (Pub. Resources Code, §§ 25500 et seq. and 21000, et seq., respectively) require an assessment of the nature and degree of environmental impacts caused by a proposed project, and require a permitting agency to evaluate the adequacy of measures proposed to lessen or avoid such impacts. The following subparts summarize the evidence presented during these proceedings on impacts to the natural and human environments.

A. Air Quality

Air quality impacts are among the most critical environmental concerns in the siting of new fossil fueled facilities in California. Title 24, California Administrative Code section 15382 (and Appendix G thereto), denotes "significant" air quality impacts as emissions which violate any ambient air quality standard, contribute substantially to an existing or projected violation, or expose sensitive receptors to substantial pollutant concentrations.

The proposed project will be located in the Monterey County portion of the North Central Coast Air Basin (NCCAB), within the jurisdiction of the Monterey Bay Unified Air Pollution Control District (MBUAPCD). The Environmental Protection Agency (EPA) has designated this area as non-attainment for ozone (O_3), unclassified for sulfur dioxides (SO_2), and attainment for nitrogen dioxide (NO_2), carbon monoxide (CO), and total

suspended particulates (TSP).[81] The California Air Resources Board has not designated these areas as either being in compliance or noncompliance with state ambient air quality standards.[82] Data from the Salinas monitoring station operated by the MBUAPCD, located approximately 45 miles north of the project site, show no violations of federal or state standards for regulated air pollutants (Dec. 22, 1986 RT 79, 85). Operation of the American 1 Project will result in pollutant emissions from the combustion turbine exhaust stack, the two auxiliary boiler exhaust stacks, the cooling tower, the fuel oil storage tanks, and associated vehicular traffic. Although pollutants such as NO_x, CO, HC, SO_2, SO_4, TSP, PM_{10}, and NH_3 (ammonia) will be emitted, all expected levels - except for NO_x and CO - will be relatively minor (Dec. 22, 1986 RT 62-63, 98, 126-27).

Applicable regulations, included in the "Air Quality" portion of Appendix A of this Decision, require the use of Best Available Control Technology (BACT) to control air pollutant emissions which exceed de minimis concentration levels. In the present case, BACT will be applied to limit emissions of both NO_x and CO. The combustion turbine generator (CTG) will be equipped with steam injection and selective catalytic reduction (SCR) to control emissions of NO_x. The auxiliary boilers will be equipped with low NO_x burners and flue gas recirculation (FGR) technology to control emissions, as

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81. The EPA redesignated the NCCAB as attainment for O_3 on August 4, 1986, but withdrew this ruling on October 7, 1986 in order to provide further opportunity to comment on the redesignation. Although the testimony indicates the EPA expected to redesignate the area as attainment for O_3 in December 1986, the evidence of record does not discuss the final resolution (Dec. 22, 1986 RT 79, 88).

82. California has promulgated ambient air quality standards for SO_2, NO_2, CO, O_x (Oxidant measured as O_3), PM_{10} (particulate matter less than 10 microns), SO_4 (sulfates), and Pb (lead) (Dec. 22, 1986 RT 85).

well as CO oxidation catalyst to control CO and non-methane hydrocarbon emissions (Dec. 22, 1986 RT 5-6, 31, 63, 98, 128). Although an emission rate of 15 ppmvd of NO_x qualifies as BACT under local rules, Applicant will limit project NO_x emissions to 9 ppm, a reduction of approximately 40 percent below allowable levels[83] (June 11, 1987 RT 94-96).

MBUAPCD Rule 207, Part 4.2.2 requires the application of emission offsets to criteria pollutants which exceed 150 pounds per day for NO_x, NMHC, SO_x or TSP, and 550 pounds per day for CO emissions. Applicant proposes to shutdown gas burners, an incinerator, and a garlic seed clove treatment system, to remove 15 acres from agricultural tilling, and to acquire banked emission reduction credits (ERCs) from the Amstar Corporation to offset anticipated NO_x and SO_2 emissions (Dec. 22, 1986 RT 64, 115). These offsets are seasonal and fall short of fully offsetting project emissions. Additional measures must be pursued (Dec. 22, 1986 RT 36, 64, 128, 130); the MBUAPCD may implement its offset exemption procedure, if appropriate, prior to project construction (Dec. 22, 1986 RT 54-55, 58).

The evidentiary record assembled at the December 22, 1986 hearing, including the MBUAPCD's final Determination of Compliance (DOC), addressed the air quality impacts of the proposed project based upon two operating profiles: the core operating profile for the first ten years of operation (which included 4,126 hrs/yr. of CTG operation and 1,500 hrs/yr. of auxiliary boiler operation); and the continuous base load operating profile for the remainder of the project life (which included approximately 8,585 hrs/yr. of

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83. See discussion under "Demand Conformance", supra.

CTG operation and a maximum of 466 hrs/yr. of auxiliary-boiler operation) (Dec. 22, 1986 RT 100). Applicant's December 30, 1986, amendment to the Power Purchase Agreement added a hypothetical cycling profile which altered operation of both the gas turbine and auxiliary boilers. Accordingly, the Committee directed the parties to supplement the air quality analysis as necessary.

At the February 23, 1987 hearing the Applicant, Staff, and MBUAPCD submitted supplementary analyses of the project's emissions. The evidence indicated that, while CO and TSP emissions would increase as a result of dispatchable operations, the increase would not prevent compliance with applicable rules (Feb. 23, 1987 RT 70-72, 75-81, 86, 91). It appeared, however, that emissions of PM_{10}, when coupled with the existing ambient concentration, could cause the resultant level to approach the state PM_{10} 24-hour standard of 50 micrograms per cubic meter. Subsequent analysis by Staff verified that the cumulative impacts of TSP and PM_{10} emissions would not cause a violation of the state PM_{10} and federal TSP 24-hour ambient air quality standards, due largely to refinements in the cooling tower design (June 11, 1987 RT 55-56).

In order to ensure the project will not cause any violations of ambient air quality standards, the Conditions of Certification below restrict concurrent operation of the CTG and auxiliary boilers to six hours per day (Feb. 23, 1987 RT 70-72, 95) and incorporate language additional to that in the PMR reflecting the refinement in cooling tower design (see, June 11, 1987 RT 55-59). The following Conditions also incorporate changes to the DOC identified by the local air district in its June 12, 1987 comments on the PMR.

The evidence uniformly establishes that the American 1 Project will operate in conformity with applicable air quality standards.

FINDINGS

Based upon the evidence of record, the Commission finds:

1. If operated in compliance with the Conditions of Certification set forth below, the American 1 Project will comply with the standards, ordinances, regulations, and laws set forth in the "Air Quality" portion of Appendix A of this Decision.

2. The American 1 Project will use Best Available Control Technology for NO_x and CO emissions.

3. NO_x emissions will be reduced approximately 40 percent below the level required to satisfy local air district rules.

CONDITIONS OF CERTIFICATION

1. Before implementing any major change in the Air Pollution Control (APC) systems identified in Determination of Compliance (DOC) Conditions 8, 15, and 16, the Emissions Monitoring Systems (EMS) identified in DOC Conditions 17 through 24, or if any changes to any Conditions of Certification related to air quality are proposed, Basic American Foods shall submit the proposed change to the Monterey Bay Unified Air Pollution Control District (MBUAPCD) and the CEC for approval. Examples of major changes are the use of alternative APC systems, EMS, or equipment, or a major change in the performance criteria specified in the referenced DOC Conditions.

   Verification: One hundred and twenty (120) days before implementing any major change, Basic American Foods shall submit to the MBUAPCD and the CEC the design details of the proposed change and a discussion of the potential change in air emissions from the project. Basic American Foods shall receive written approval from the CEC prior to implementing any major change.

2. Basic American Foods shall report any minor change in the APC systems identified in DOC Conditions 8, 15, and 16, or the EMS identified in DOC Conditions 17 through 24, to the MBUAPCD and CEC staff. Examples of minor changes are modifications made during initial start up of the facility to ensure compliance with applicable emission limitations, or use of alternative hardware to meet the required performance criteria.

Verification: Basic American Foods shall notify the MBUAPCD and the CEC staff in writing forty-eight (48) hours in advance of making any minor change, whenever possible, but in no event later than seven (7) working days after implementing the change.

3. Basic American Foods shall obtain a Prevention of Significant Deterioration (PSD) permit or an exemption from the MBUAPCD and comply with said permit.

   Verification: Within 30 days of receipt of the PSD permit or exemption from MBUAPCD, Basic American Foods shall submit a copy of the PSD permit or exemption to the CEC staff.

4. All areas disturbed by on-site or off-site construction, and under Basic American Foods' responsibility, shall be properly treated for dust control by water application, or the use of another dust palliative, with the intent of minimizing fugitive dust emissions. If any dust palliative other than water is proposed, Basic American Foods shall obtain approval from the MBUAPCD.

   Verification: Basic American Foods shall make the construction site available to the MBUAPCD and the CEC staff for inspection and monitoring.

5. The MBUAPCD shall monitor all activities related to site preparation and construction, and monitor operation of the Basic American Foods American 1 Cogeneration Project to ensure compliance with the Conditions of Certification contained in the Commission Decision relating to Air Quality. The MBUAPCD shall perform all duties and functions normally performed by the MBUAPCD and shall have the authority to issue a Permit to Operate. The conditions of the Permit to Operate will be consistent with the Certification Conditions in the Commission Decision.

   Verification: The MBUAPCD and the CEC staff will, at the request of either party, meet to review the status of project compliance. The CEC staff shall be allowed to review the MBUAPCD's enforcement and project files except for trade secrets as defined in MBUAPCD rules. Basic American Foods shall submit to the CEC a report on the status of compliance for each Condition related to air quality in the Commission Decision on the Basic American Foods American 1 Cogeneration project. These reports shall be submitted quarterly during construction and during the first two years of operation, and shall be submitted annually thereafter.

6. Emission of carbon monoxide in the turbine exhaust discharge to the atmosphere shall not exceed 10 ppmv, calculated at 15 percent O_2, dry.

   Verification: The terms of this Condition shall be monitored as described in DOC Condition 17.

7. The annual emissions of the gas turbine shall not exceed 130 tons per year of NO_x and 82 tons per year of CO.

   Verification: The terms of this Condition shall be monitored as described in DOC Conditions 17, 19, 29, and 30.

8. The total number of operating hours of the auxiliary boilers shall not exceed 1500 full load equivalent hours per year during the core operating profile of operation and 466 hours per year during the continuous base load operation.

   Verification: Basic American Foods shall monitor and record all periods of auxiliary boiler(s) firing to include natural gas and oil firings in a log maintained on site and submit the records to MBUAPCD at the time of permit renewal. Basic American Foods shall submit the records to the CEC staff in their annual compliance report to the CEC.

9. Within 60 days after achieving the maximum auxiliary boiler operating conditions, but not later than 180 days after initial start up, performance tests shall be conducted in accordance with the MBUAPCD test procedures, and written results of the performance tests shall be provided to the District within 30 days after testing. A testing protocol shall be submitted to the District 30 days prior to testing, and the District shall be notified at least 10 days prior to the actual testing date so that a District representative can be present to observe. The performance test shall be done on each auxiliary boiler at 50 percent load and shall include, but will not be limited to, a test of the exhaust stream directly before the oxidation catalyst and in the auxiliary boiler exhaust stack for:

   a. Carbon Monoxide, ppm at 3 percent O_2 and lb/hr.
   b. Non-methane Hydrocarbons, ppm and lb/hr.
   c. Oxides of Nitrogen, ppm at 3 percent O_2 and lb/hr.
   d. Oxides of Sulfur, ppm at 3 percent O_2 and lb/hr.

   and a test of the exhaust stack for:

   e. Particulates, gr/sdcf and lb/hr.

   and the following process parameter:

   f. Natural gas consumption.

   Verification: Basic American Foods shall submit for approval a performance test protocol to the MBUAPCD and CEC staff 30 days before beginning testing of the auxiliary boilers. Basic American Foods shall notify the District at least 10 days before the test date and shall submit to the MBUAPCD and CEC staff a written report on the results of such performance test no later than 30 days after the test is concluded.

10. DOC Condition 1:* The gas turbine pollutant mass emission rates in the exhaust discharged to the atmosphere shall not exceed the following limits:

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* Conditions 10 through 46 reflect those contained in the MBUAPCD's final Determination of Compliance, dated December 3, 1986, and as amended through its June 12, 1987 comments following the Committee hearing on the PMR.

	lb/hr	lb/day
NO_x	30.1	722
CO	20.0	480
NH_3	13.9	334
TSP	2.5	60
NHHC	1.0	24
SO_2	0.49	12

These limits shall not apply during start up, which is not to exceed five (5) hours, or shut down, which is not to exceed two (2) hours, or during periods of oil firing. SCR catalytic controls, steam injection, and good engineering practices shall be used to the fullest extent practical during start up to minimize pollutant emissions.

Verification: The terms of this Condition shall be monitored as described in DOC Conditions 17, 19 through 21, and 25.

11. DOC Condition 2: While firing on natural gas the emissions of oxides of nitrogen, as NO_2, in the turbine exhaust discharged to the atmosphere shall not exceed 9 ppmvd, calculated at 15 percent O_2 dry.

    Verification: The terms of this Condition shall be monitored as described in DOC Conditions 17 and 25.

12. DOC Condition 3: Emissions of ammonia in the turbine exhaust discharged to the atmosphere shall not exceed 10 ppmv, calculated at 15 percent O_2, dry.

    Verification: The terms of this Condition shall be monitored as described in DOC Conditions 20, 25, and 27.

13. DOC Condition 4: The gas turbine shall only be fired on natural gas, except that No. 2 fuel oil may be used during periods of natural gas curtailment by the utility, or in the event of natural gas supply malfunction or disruption. In any event, No. 2 fuel oil shall not be used for more than 240 hours per year.

    Verification: The terms of this Condition shall be monitored as described in DOC Condition 29.

14. DOC Condition 5: During periods of No. 2 fuel oil firing, the gas turbine pollutant mass emission rates in the exhaust discharged to the atmosphere shall not exceed the following limits:

	lb/hr	lb/day
SO_2	116.1	2786
CO	22.0	528
NO_x	47.8	1147
NH_3	13.9	334
TSP	10.0	240
NMHC	1.0	24

These limits shall not apply during start up, which is not to exceed five (5) hours, or shut down, which is not to exceed two (2) hours. SCR catalytic controls, steam injection, and good engineering practices shall be used to the fullest extent practical during start up to minimize pollutant emissions.

Verification: The terms of this Condition shall be monitored as described in DOC Conditions 17, 19 through 21, and 25.

15. DOC Condition 6: While firing on No. 2 oil the emissions of oxides of nitrogen, as NO_2, in the turbine exhaust discharged to the atmosphere shall not exceed 15 ppmvd, calculated at 15 percent O_2 dry.

    Verification: The terms of this Condition shall be monitored as described in DOC Conditions 17 and 25.

16. DOC Condition 7: Basic American Foods shall submit a turbine start-up protocol for both hot and cold start-up, which details the procedures that will be used to minimize the pollutant emissions, prior to the initial start-up, and shall amend this protocol based on operating experience.

    Verification: Basic American Foods shall submit a turbine start up protocol to the MBUAPCD and CEC staff at least 60 days before the initial start up of the gas turbine. Basic will provide the CEC staff a copy of the MBUAPCD's comments on the protocol and a revised protocol, based on operating experience, 30 days after receiving comments from the MBUAPCD and CEC staff.

17. DOC Condition 8: Details of the selective catalytic reduction (SCR) system, including but not limited to manufacturer, catalyst type, linear velocity, catalyst volume, ammonia injection rate, ammonia injection grid parameters, must be submitted to the Air Pollution Control District and receive District approval prior to starting construction.

    Verification: Basic American Foods shall submit to the MBUAPCD the SCR system design details 120 days before construction begins. Basic American Foods shall submit to the CEC staff the MBUAPCD's approval 15 days after receipt of District approval.

18. DOC Condition 9: The auxiliary boiler pollutant mass emission rates in the exhaust discharged to the atmosphere shall not exceed the following limits, per boiler:

	lb/hr
NO_x	7.25
CO	2.65
TSP	0.63
NMHC	0.2
SO_2	0.085

- These limits shall not apply during periods of oil firing.

Verification: The terms of this Condition shall be monitored as described in DOC Conditions 18 and 26.

19. DOC Condition 10: While firing on natural gas, the emissions of oxides of nitrogen, as NO_2, in the auxiliary boiler exhaust discharged to the atmosphere shall not exceed 40 ppmvd, calculated at 3 percent O_2 dry.

    Verification: The terms of this Condition shall be monitored as described in DOC Conditions 18 and 26.

20. DOC Condition 11: The auxiliary boilers shall only be fired on natural gas, except that No. 2 fuel oil may be used during periods of natural gas curtailment by the utility, or in the events of natural gas supply malfunction or disruption. In any event, No. 2 fuel oil shall not be used for more than 240 hours per year per boiler.

    Verification: The terms of this Condition shall be monitored as described in DOC Condition 29.

21. DOC Condition 12: During periods of No. 2 oil firing the auxiliary boiler pollutant mass emission rates in the exhaust discharged to the atmosphere shall not exceed the following limits, per boiler:

	lb/hr
NO_x	13.8
CO	2.85
TSP	12.65
NMHC	0.25
SO_2	18.1

    Verification: The terms of this Condition shall be monitored as described in DOC Conditions 18 and 26.

22. DOC Condition 13: While firing on No. 2 oil the emissions of oxides of nitrogen, as NO_2, in the auxiliary boiler exhaust discharged to the atmosphere shall not exceed 69 ppmvd, calculated at 3 percent O_2 dry.

    Verification: The terms of this Condition shall be monitored as described in DOC Conditions 18 and 26.

23. DOC Condition 14: The sulfur content of any No. 2 oil used as fuel in the turbine or auxiliary boilers shall not exceed 0.12 percent by weight. All fuel received must be certified to contain 0.12 percent sulfur, or less, by weight.

    Verification: Basic American Foods shall obtain and maintain records certifying the sulfur content of the fuel oil. These records shall be made available to the MBUAPCD on request and shall be provided to the MBUAPCD at the time of the annual permit renewal.

24. DOC Condition 15: Details of the auxiliary boiler oxidation catalyst system, including but not limited to manufacturer, catalyst type, linear

velocity, and catalyst volume must be submitted to the Air Pollution Control District and receive District approval prior to starting construction.

Verification: Basic American Foods shall submit to the MBUAPCD the oxidation catalyst system design details 120 days before construction begins. Basic American Foods shall submit to the CEC staff the MBUAPCD's approval 15 days after receipt of District approval.

25. DOC Condition 16: Details of the auxiliary boiler low-NO_x burners and flue gas recirculation system must be submitted to the Air Pollution Control District and receive District approval prior to starting construction.

Verification: Basic American Foods shall submit to the MBUAPCD the low-NO_x burners and flue gas recirculation system design details 120 days before construction begins. Basic American Foods shall submit to the CEC staff the MBUAPCD's approval 15 days after receipt of District approval.

26. DOC Condition 17: A continuous monitoring system must be installed, calibrated, and operated to measure the HRSG exhaust stack for NO_x, CO, and O_2. The system shall continuously record the measured concentrations, and shall calculate and continuously record the NO_x and CO concentrations corrected to a value of 15 percent O_2, dry, and NO_x and CO mass emission rates in pounds per hour. District approval for the system installation must be received prior to installation.

Verification: Basic American Foods shall submit a continuous monitoring plan for the gas turbine to the MBUAPCD and CEC staff 90 days before installing the monitoring system, but not later than 180 days before beginning operation of the facility. Basic American Foods shall submit to the CEC staff a copy of MBUAPCD's comments on the plan, and approval or disapproval of the plan within 10 days of receipt from the MBUAPCD.

27. DOC Condition 18: A continuous monitoring system must be installed, calibrated, and operated to measure the auxiliary boiler exhaust for NO_x, CO, and O_2. The system shall continuously record the measured concentrations, and shall calculate and continuously record the NO_x and CO concentrations corrected to a value of 3 percent O_2, dry, and NO_x and CO mass emission rates in pounds per hour. District approval for the system installation must be received prior to installation.

Verification: Basic American Foods shall submit a continuous monitoring plan for the auxiliary boilers to the MBUAPCD and CEC staff 90 days before installing the monitoring system, but not later than 180 days before beginning operation of the facility. Basic American Foods shall submit to the CEC staff a copy of MBUAPCD's comments on the plan, and approval or disapproval of the plan within 10 days of receipt from the MBUAPCD.

28. DOC Condition 19: A continuous monitoring system must be installed and operated to monitor and record the fuel consumption and the mass ratio of steam to fuel being fired in the turbine. This system must be accurate to within $\pm$ 5 percent.

Verification: Basic American Foods shall maintain records of continuous fuel consumption and the steam to fuel mass ratio monitoring. These records shall be maintained on file for at least two years and shall be made available to the MBUAPCD and CEC staff upon request.

29. DOC Condition 20: A continuous monitoring system must be installed and operated to monitor and record the mole ratio of injected ammonia to gas turbine outlet (HRSG) NO_x. This system must be accurate to within ± 5 percent.

    Verification: Basic American Foods shall maintain records of the mole ratio of injected ammonia to gas turbine outlet NO_x monitoring. These records shall be maintained on file for at least two years and shall be made available to the MBUAPCD and CEC staff upon request.

30. DOC Condition 21: Instrumentation shall be installed to measure SCR catalyst inlet temperature and pressure differential across the SCR catalyst.

    Verification: Basic American Foods shall maintain records of the measured inlet temperature and pressure differences across the SCR catalyst. These records shall be maintained on file for at least two years and shall be made available to the District and CEC staff upon request.

31. DOC Condition 22: Instrumentation shall be installed to measure the auxiliary boiler oxidation catalyst inlet temperature and pressure differences across the oxidation catalyst.

    Verification: Basic American Foods shall maintain records of the measured inlet temperature and pressure differences across the auxiliary boiler oxidation catalyst. These records shall be maintained on file for at least two years and shall be made available to the District and CEC staff upon request.

32. DOC Condition 23: Four sampling ports must be provided in the turbine exhaust stack, 8 to 10 duct diameters downstream and 2 duct diameters upstream of any flow disturbance, 90 degrees apart and shall consist of 4 inch NPT couplings welded to the stack and with 4 inch pipe plugs. A 5 foot wide sampling platform or other means of providing safe access to the sampling ports must be installed. The location of the sampling ports and platform must be approved by the Air Pollution Control District prior to installation.

    Verification: Basic American Foods shall submit the location of the sampling ports and platform for the gas turbine to the MBUAPCD and CEC 90 days before installation. Basic American Foods shall submit to the CEC staff a copy of MBUAPCD's comments on the locations, and approval or disapproval of the locations within 10 days of receipt from the MBUAPCD.

33. DOC Condition 24: Four sampling ports must be provided in the auxiliary boiler exhaust stack, 8 to 10 duct diameters downstream and 2 duct diameters upstream of any flow disturbance, 90 degrees apart and shall

consist of 4 inch NPT couplings welded to the stack and with 4 inch pipe plugs. A sampling platform or other means of providing safe access to the sampling ports must be installed. The location of the sampling parts and platform must be approved by the Air Pollution Control District prior to installation.

Verification: Basic American Foods shall submit the location of the sampling ports and platform for the auxiliary boilers to the MBUAPCD and CEC staff 90 days before installation. Basic American Foods shall submit to the CEC a copy of MBUAPCD's comments on the locations, and approval or disapproval of the locations within 10 days of receipt from the MBUAPCD.

34. DOC Condition 25: Within 60 days after achieving the maximum turbine operating conditions, but not later than 180 days after initial start-up, performance tests shall be conducted in accordance with the MBUAPCD test procedures, and written results of the performance tests shall be provided to the District within 30 days after testing. A testing protocol shall be submitted to the District 30 days prior to testing and the District shall be notified at least 10 days prior to the actual testing day so that a District observer can be present. The performance test shall include, but will not be limited to, a test of the exhaust stream directly after the turbine and in the exhaust stack for:

a. Oxides of Nitrogen, ppm at 15 percent O_2, dry and lb/hr.

b. Carbon Monoxide, ppm at 15 percent O_2, dry and lb/hr.

c. Oxides of Sulfur, ppm and lb/hr.
and a test of the exhaust stack for:

d. Particulates and particle size distribution, gr/sdcf and lb/hr.

e. Ammonia, ppm at 15 percent O_2, dry and lb/hr.

f. Non-methane Hydrocarbon, ppm and lb/hr.
and the following process parameters:

g. Natural gas consumption.

h. Electricity generated during the test.

i. Ammonia injected.

j. Steam injection rate and steam to fuel ratio.

Verification: Basic American Foods shall submit for approval a performance test protocol to the MBUAPCD and CEC staff 30 days before beginning testing of the gas turbine. Basic American Foods shall submit to the MBUAPCD and CEC staff a written report on the result of such performance tests within 30 days after testing. Written notice of the performance test shall be provided to the MBUAPCD 10 days prior to the test so that an observer can be present.

35. DOC Condition 26: Within 60 days after achieving the maximum auxiliary boiler operating conditions, but not later than 180 days after initial start up, performance tests shall be conducted in accordance with the MBUAPCD test procedures, and written results of the performance tests shall be provided to the District within 30 days after testing. A testing protocol shall be submitted to the District 30 days prior to testing and District notification at least 10 days prior to the actual testing date shall be provided so that a District observer can be present. The performance test shall include, but will not be limited to, a test of the exhaust stream directly before the oxidation catalyst and in the auxiliary boiler exhaust stack for:

    a. Carbon Monoxide, ppm at 3 percent O_2 and lb/hr.

    b. Non-methane Hydrocarbons, ppm and lb/hr.

    c. Oxides of Nitrogen, ppm at 3 percent O_2 and lb/hr.

    d. Oxides of Sulfur, ppm at 3 percent O_2 and lb/hr.
    and a test of the exhaust stack for:

    e. Particulates and particle size distribution, gr/sdcf and lb/hr.
    and the following process parameters:

    f. Natural gas consumption

    Verification: Basic American Foods shall submit for approval a performance test protocol to the MBUAPCD and CEC staff 30 days before beginning testing of the auxiliary boilers. Basic American Foods shall submit to the MBUAPCD and CEC staff a written report on the result of such performance tests within 30 days after testing. Written notice of the performance test shall be provided to the MBUAPCD 10 days prior to the test so that an observer can be present.

36. DOC Condition 27: Basic American Foods shall conduct quarterly tests in the first year, and semi-annual tests in the succeeding years, to determine turbine stack discharge ammonia emissions. Tests shall be conducted in accordance with MBUAPCD test procedures and the District shall be notified at least 7 days prior to testing. The test results shall be submitted to the District within thirty days after testing.

    Verification: Basic American Foods shall submit to the MBUAPCD the results of the quarterly tests within thirty days of completing the tests. Basic American Foods shall provide the CEC staff with a summary of the test results in the quarterly or annual compliance report. Basic American Foods shall provide written notification to MBUAPCD and the CEC staff 7 days prior to conducting the test so that an observer may be present.

37. DOC Condition 28: Basic American Foods shall pursue the acquisition of the necessary emission offsets for the project.

    Verification: Basic American Foods shall submit to the MBUAPCD and CEC an emission offset package which contains the necessary offsets for the project 45 days before construction begins.

38. DOC Condition 29: Basic American Foods shall monitor and record all periods of oil firing in a log maintained on site and shall submit a summary of this data on an annual basis, at the time of permit renewal.

    Verification: Basic American Foods shall submit the fuel oil firing records to MBUAPCD at the time of permit renewal, and shall submit the records to the CEC in their annual compliance report to the CEC staff.

39. DOC Condition 30: Basic American Foods shall monitor and record all start-up, shut-down and operational profiles in a log maintained on site.

    Verification: Basic American Foods shall submit the start-up and shut-down records to MBUAPCD upon request, and shall submit the records to the CEC staff in their annual compliance report to the CEC staff.

40. DOC Condition 31: The turbine shall undergo no more than one start-up and one shut-down per day.

    Verification: The terms of this Condition shall be monitored as described in DOC Condition 30.

41. DOC Condition 32: Operation must be conducted in compliance with all data and specifications submitted with the application.

    Verification: Basic American Foods shall submit, in its quarterly or annual compliance report to the CEC staff, a statement on the status of compliance with DOC Condition 32.

42. DOC Condition 33: Equipment must be properly maintained and kept in good operating condition.

    Verification: Basic American Foods shall provide the MBUAPCD and CEC staff access to the project site to inspect all equipment. Basic American Foods shall submit, in its quarterly or annual compliance report to the CEC staff, a statement on the status of compliance with DOC Condition 33.

43. DOC Condition 34: The equipment must not be operated unless it is vented to air pollution control equipment which is in full use.

    Verification: Basic American Foods shall submit, in its quarterly or annual compliance report to the CEC staff, a statement on the status of compliance with DOC Condition 34.

44. DOC Condition 35: Basic American Foods shall cause to be operated an ambient monitoring station at a site approved by the Air Pollution Control Officer, for NO_2, CO, PM_{10}, and O_3 and standard meteorological parameters on a continuous basis, in accordance with the EPA requirement contained in 40 CFR 58, and in accordance with the California Air Resources Board guidelines as deemed necessary, for the life of the project or until the Air Pollution Control Officer determines that good cause exists to discontinue the monitoring of a pollutant. Data gathered pursuant to this Condition shall be reported to the Air Pollution Control

District on a monthly basis, no later than 30 days from the end of the month during which the data is collected.

Verification: Basic American Foods shall submit to the MBUAPCD and CEC staff, for approval, 90 days before initial start up of the facility an ambient monitoring plan. Basic American Foods shall submit to the CEC staff MBUAPCD's approval of the plan 15 days after receipt. Basic American Foods shall submit to the MBUAPCD the results of the monitoring on a monthly basis, no later than 30 days from the end of the month during which the data is collected, and summarize the results and status of the monitoring in the annual compliance report to the CEC staff.

45. DOC Condition 36: Any authorized representative of the Monterey Bay Unified Air Pollution Control District shall be permitted:

    a. to enter upon those premises where the source is located or in which any records are required to be kept under the terms and conditions of the Authority to Construct:

    b. to have access to and copy any records required to be kept under the terms and conditions of this Authority to Construct;

    c. to inspect any equipment, operation, or process described or required in this Authority to Construct; and

    d. to sample emissions from the source.

    Verification: Basic American Foods shall provide the MBUAPCD and CEC staff access to the project site. Basic American Foods shall submit, in its quarterly or annual compliance report to the CEC, a statement on the status of compliance with DOC Condition 36.

46. DOC Condition 37: The existing gas fired burners in the ten (10) Proctor and Schwartz three stage vegetable dryers and gas fired burners in the D-stage humidifiers may not be fired upon start-up of the gas turbine or auxiliary boiler(s).

    Verification: MBUAPCD and CEC staff shall be informed regarding the shut-down or change of operation of these dryers.

47. The gas turbine and the auxiliary boilers must not be operated simultaneously for more than 6 full load equivalent hours during any 24-hour period.

    Verification: Basic shall monitor and record all periods of simultaneous operation of the auxiliary boilers and gas turbine. The record shall include the hours of operation and percent of capacity of the auxiliary boilers. Basic shall maintain a log of these records on-site and submit the records to MBUAPCD at the time of renewal of the permit. Basic shall submit the records to the CEC staff in their annual compliance report to the CEC.

48. Basic shall purchase a cooling tower with a guaranteed drift rate not to exceed 0.002 percent of the flow rate of the circulating cooling water.

Verification: Basic shall submit to the MBUAPCD and the CEC staff the cooling tower manufacturer's design specifications and guaranteed drift rate at least 60 days prior to the construction of the cooling tower, and shall receive the MBUAPCD's and CEC staff's written approval prior to beginning construction of the cooling tower.

49. Basic shall install and operate a flow meter to monitor the circulating cooling water flow rate, or equivalent method for measuring flow may be used as approved by the MBUAPCD.

    Verification: Basic shall submit to the MBUAPCD a circulating cooling water flow rate monitoring plan at least 60 days before installation. The plan shall include, but not be limited to, the method of monitoring, reporting frequency, and the calibration techniques.

50. Basic shall conduct monthly compliance tests to measure the total dissolved solids (TDS) concentration of the cooling tower circulating water.

    Verification: Basic shall submit the test results to the MBUAPCD and to the CEC staff on a quarterly basis. Basic shall maintain the monitoring records on site for two years and shall make them available to the MBUAPCD and CEC staff upon request.

51. Basic shall design and operate the cooling tower so that the PM_{10} emissions from the cooling tower does not exceed 20 pounds per day. The PM_{10} emissions shall be calculated as the product of circulating cooling tower flow rate times TDS concentration times the circulating cooling water drift rate, as follows:

    (PM_{10} in lbs/day) = (flow rate in gpm) x (TDS in ppm) x
    (drift loss = 0.002 percent) x (conversion factor = 0.012)

    Verification: The terms of this Condition shall be monitored as described in Conditions 49 and 50.

51. Basic may request approval from MBUAPCD and CEC staff for revisions to the PM_{10} daily emission limit from the cooling tower after the first year of operation provided that Basic can substantiate that the actual PM_{10} monitored pursuant to DOC Condition 35 shows a lower background 24-hours ambient concentration than the assumed existing value of 42 ug/m^3.

    Verification: The terms of this Condition shall be monitored as described in DOC Condition 35. Basic shall submit its request for approval of revising the TSP daily emission limit to MBUAPCD and CEC staff no sooner than one year after start of operation. The request shall include ambient air quality monitoring data and justification for the requested revision.

B. Biological Resources

Biological resources include endangered, threatened, or fully protected wildlife species, species of special concern, areas of critical concern, and endangered, threatened, or rare plant species. Construction of the cogeneration facility, the water supply line, or the transmission line could jeopardize these resources through direct disturbance or habitat degradation or reduction.

The project will be constructed on a 7-acre parcel which is currently under cultivation. The north and east border of the site is an escarpment partially populated with natural vegetation. Other natural habitat in the area includes the borders of other cultivated acreage and the fields surrounding the nearby airport. The fields to the northeast of the airport support various wildlife species including the endangered San Joaquin kit fox; however, these fields are separated from the project site by two airport runways, as well as commercial and residential development (Nov. 6, 1986 RT 17, 23). The water supply line travels approximately 2600 feet from wells west of the project site, through a cultivated field bordered by natural plants. Because these locations are under cultivation, they are used only incidentally by wildlife species in the area. No significant impacts to wildlife species, including the endangered San Joaquin kit fox, are likely (Nov. 6, 1986 RT 6, 19, 22).

Transmission line Route 1, preferred by both the Applicant and the Staff (Nov. 6, 1986 RT 3, 12), runs west from the facility across cultivated land to the Southern Pacific Railroad, and then proceeds along the railroad

right-of-way to PGandE's Coburn Substation. The route consists of cultivated land or gravelled areas near the railroad tracks; a portion is used as an access road for agricultural and railroad machinery. No significant wildlife or vegetation is found along this route (Nov. 6, 1986 RT 6, 20-21).[84]

Neither the construction and operation of the proposed facility, nor the use of transmission line Route 1, will cause any significant impacts to biological resources in the area (Nov. 6, 1986 RT 12, 23, 25; Exhibit 11). Moreover, as discussed under "Demand Conformance," supra, potential benefit may accrue to biological resources if Applicant provides the riparian habitat enhancement described therein.

FINDINGS

Based upon the evidence of record, the Commission finds:

1. Construction and operation of the cogeneration facility and the water supply line will cause no significant impacts to area biological resources.

2. Transmission line Route 1 is preferable from a biological resources perspective, and will cause no significant biological resources impacts.

3. No Conditions of Certification are necessary to mitigate Biological Resources impacts along transmission line Route 1 or at the project site.

4. Construction and operation of the proposed project will comply with the applicable standards, ordinances, and laws identified in the "Biological Resources" portion of Appendix A of this Decision.

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84. Alternative transmission line Route 2, which runs along the west side of Metz Road to the PGandE substation, parallels endangered San Joaquin kit fox habitat and an important nesting area for one of the two known bank swallow colonies in Monterey County. Potential impacts to these biological resources will be avoided by the use of Route 1 (Nov. 6, 1986 RT 6, 20-21, 23-24).

5. Benefit to biological resources will result if Applicant funds riparian habitat preserve pursuant to "Demand Conformance" Condition of Certification number 3.

C. Cultural Resources

Paleonotological resources, prehistoric archaeological resources, ethnographic resources (resources important to the heritage of ethnic or cultural groups), and historic resources (evidence of human activity since the late 18th century to 50 years ago) comprise the scope of cultural resources reviewed as part of the project's licensing process.

Paleontological resources include fossilized remains of prehistoric plants or animals. Because the proposed site rests on about 40 feet of river deposit underlain with approximately 175 feet of alluvial deposits, paleontological resources or prehistoric fossils in the area would occur from secondary deposition, originating from the elevated areas surrounding the site. Remains found in the project area would therefore be less valuable than those from the primary deposits. Field surveys and literature searches have not revealed the existence of paleontological resources in the project area (Nov. 6, 1986 RT 45, 47).

Archaeological surveys, field surveys, and literature and record searches have not indicated the presence of significant prehistoric, historic, or ethnographic resources in the area. While years of cultivation and road and railroad construction make surface resources unlikely, the potential remains for significant subsurface cultural resources (Nov. 6, 1986 Rt 45-48). Should potentially significant resources be discovered during site preparation and construction, activities will be halted and appropriate measures implemented to evaluate and, if necessary, safeguard any discoveries.

FINDINGS

Based upon the evidence of record, the Commission finds:

1. The proposed site for the American 1 project has no known resources of paleontological, archaeological, ethnographic, or historic significance.

2. Provisions contained in the Conditions of Certification, below, will ensure the opportunity for evaluation and preservation of any significant cultural resources discovered during site development.

3. With the implementation of the Conditions of Certification set forth below, the American 1 project will comply with the standards, ordinances, regulations, and laws set forth in the "Cultural Resources" portion of Appendix A of this Decision.

CONDITIONS OF CERTIFICATION

1. Basic shall designate a qualified paleontologist or geologist who will be available during site preparation and construction activities for the American 1 project.

   Verification: Basic shall provide the CEC staff with the name and telephone number of the paleontologist or geologist at least 30 days prior to the start of any ground disturbance and construction activities.

2. If potentially significant paleontological resources are discovered during construction, work in the immediate area of the resources shall be halted and the designated paleontologist or geologist will be consulted to evaluate the significance of the resources. Significant fossils include vertebrate remains; fossils lacking significance include common invertebrate and plant fossils.[85] Basic shall promptly notify the CEC staff of the discovery of any potentially significant resources and subsequent work stoppage. If the resource is determined to be significant, the designated paleontologist or geologist and representatives of Basic and the CEC staff shall meet within one working day of the notification to discuss possible mitigation measures. Pending resolution of this matter, construction activity in the resource area shall remain stopped.

   Verification: Basic shall notify the CEC staff within one working day of the potentially significant resource discovery and subsequent work stoppage.

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85. Although the definition of "significant" is subject to interpretation, testimony by expert witnesses for Staff and Applicant indicates its useage reflects the accepted professional standard, and will aid in the determination for evaluating a resource (See discussion at Nov. 6, 1986 RT 33-34, 58).

3. Basic shall designate a qualified cultural resource specialist who will be available during site preparation and construction activities for the American 1 Project.

   Verification: Basic shall provide the CEC staff with the name and telephone number of the designated cultural resource specialist at least 30 days prior to the start of any ground disturbance and construction activities.

4. If prehistoric archaeological, historic, or ethnographic resources are discovered during construction, work in the immediate area of the resources shall be halted and the designated cultural resource specialist shall be consulted to evaluate the significance of the resources. Basic shall promptly notify the CEC staff of the discovery of any potentially significant resources and subsequent work stoppage. If the resources are prehistoric or ethnographic, a local Native American representative shall be consulted. The designated cultural resources specialist and representatives of Basic and the CEC staff shall meet within one working day of the notification to discuss possible mitigation measures. Pending resolution of this matter, construction activity in the resource area shall remain stopped.

   Verification: Basic shall notify the CEC staff within one working day of the potentially significant resource discovery and subsequent work stoppage.

5. Basic shall prepare and present cultural and paleontological training to all of its personnel and the personnel of its contractors or subcontractors who may be involved with ground clearance or earth moving, in order to develop an awareness of and sensitivity to potential project impacts on potentially significant cultural and paleontological resources. This training shall include development of the ability to recognize potentially significant cultural resources, and the ability to distinguish potentially significant paleontological resources from paleontological resources clearly lacking significance (as defined in Condition 2).

   Verification: Basic shall submit to the CEC staff, at least 90 days prior to the start of ground clearance or earth moving, a copy of the written materials to be used in its training program. Within 30 days, the CEC staff shall respond as to the adequacy of the program. Prior to the start of ground clearance or earth moving, Basic shall submit to the CEC staff evidence of presentations to all personnel who may be involved with ground clearance or earth moving.

D. Land Use

The proposed project site is located within the recently annexed northern portion of King City, with proposed water and transmission lines extending into Monterey County's jurisdiction.

The facility will be constructed on a 7-acre parcel which, while currently under cultivation, is zoned for industrial use. Other industries exist and are compatible with the proposed project (Nov. 6, 1986 RT 62, 75, 78, 81-82). Some industrial development is located between the site and an existing single residence to the southeast. A commercial strip between the industrial zone along the west side of Metz Road and the residential area at the northwest of King City will buffer potential impacts (Nov. 6, 1986 RT 73, 79). The Residential Reserve to the southwest of the plant does not have a designated buffer zone; however, the impact of the facility on this Reserve is speculative, depending upon the relative timing of the development of industrial, commercial and residential uses in that area. The proposed project is thus consistent with existing land use patterns, and will cause no significant residential impacts (Nov. 6, 1986 RT 62, 63, 79, 81).

The water wells and most of the water line route will be located within Monterey County's jurisdiction in an area designated for agricultural use. The remainder of the water line (which is located in King City's sphere of influence) crosses industrial and residential reserves. Wells and waterlines are a typical use in, and are compatible with, agricultural, industrial and residential areas. Because construction of the wells and water line is a short-term activity, no significant impacts on the surrounding land uses are likely (Nov. 6, 1986 RT 79, 82).

Transmission line Route 1 initially follows an existing right-of-way located within King City. This area is zoned for industrial use, and presently has an existing transmission line (Nov. 6, 1986 RT 80, 82). The remaining portion of Route 1 will require the acquisition of 12,000 feet of new right-of-way. Since the proposed line will partially parallel an existing transmission line of about equal height, no significant impact to aerial agricultural applications will occur (Nov. 6, 1986 RT 80, 83) Restrictions on the drilling of wells or stacking of flammable materials near the transmission line will likewise have an insignificant impact on nearby agricultural uses (Nov. 6, 1986 RT 80). Because of the small amount of agricultural land which would be removed from production, the existence of access roads to the construction areas, and the relatively short construction period, the transmission line route will have only insignificant impacts on the area's land use (Nov. 6, 1986 RT 79-81).

FINDINGS:

Based upon the evidence of record, the Commission finds:

1. Development of the American 1 Project, as proposed, is consistent with the local land use provisions contained in the "Land Use" portion of Appendix A of this Decision.
2. The American 1 Project will cause no known significant impacts to area land uses.
3. No Conditions of Certification are necessary to ensure compliance with local land use plans.

E. Noise

Generally, the accepted criterion for determining the existence of a noise impact is audibility. The parties examined the expected noise levels of project construction and operation, the impacts on noise-sensitive receptors, and the expected conformity with local and state ordinances.

A "worst-case" assessment indicates noise generated during construction will bring the noise level at the south boundary of the project site to 73 dBA. This is equal to, and therefore in compliance with, the King City zoning ordinance limit for noise at industrial boundaries. Because of the absence of noise sensitive receptors along this boundary, the impact from the facility will be insignificant (Nov. 6, 1986 RT 198-200).

Construction will increase the daytime level of noise at the nearest existing residence by about 2 dBA. The witnesses did not consider this increase significant. Construction noise impact on the Residential Reserve west of the plant will also be inconsequential since the project should be completed well before any residences are built in the area (Nov. 6, 1986 RT 200).

During operation, noise generated along the boundaries of the project will fall within the King City zoning ordinance limit for industrial perimeters (Nov. 6, 1986 RT 204). The operational noise level, as calculated by Applicant, will exceed the King City zoning ordinance limit (55 dBA) for residential areas at night by 2 dBA along the eastern boundary of the Residential Reserve. However, Staff's calculations show a level of 55 dBA

along that boundary. While these calculations are slightly less conservative than Applicant's, they are more probable due to the inclusion of an additional attenuation factor, indicating that compliance with the City zoning ordinance is likely (Nov. 6, 1986 RT 204). Moreover, the Conditions of Certification contain procedures to address noise-related complaints associated with the American 1 Project.

No significant noise impact on plant personnel is expected during facility construction or operation. Applicant will mitigate construction-related noise by limiting construction hours to between 7:00 a.m. and 7:00 p.m., and by silencing construction-related equipment. With the incorporation of specific engineering measures in equipment and facility design specifications, Applicant will limit most portions of the plant to noise levels below 90 dBA, the Cal/OSHA limit for an 8-hour workday. In areas of higher noise levels, work duration will be limited. With the implementation of these measures, the noise impact on plant personnel will be insignificant (Nov. 6, 1986 RT 180, 206-209).

The transmission line (Route 1) will pass between 500 and 1000 feet of a single-family residence, the only noise-sensitive receptor in the vicinity. Construction noise will not create a significant impact due to its brief duration. Operation of the line may create some low level corona noise during rainy periods; however, since the residence is some distance from the line, the impact will be insignificant (Nov. 6, 1986 RT 181, 206).

Assuming compliance with the Conditions of Certification below, the noise levels generated during the construction and operation of the American 1

Cogeneration Project will be acceptable (Nov. 6, 1986 RT 181, 210; Exhibit 13.)

FINDINGS

Based upon the evidence of record, the Commission finds:

1. With the implementation of the Conditions of Certification, the American 1 Project will comply with the applicable laws, ordinances, regulations, and standards identified in the "Noise" portion of Appendix A of this Decision.

2. With the implementation of the Conditions of Certification, no significant adverse noise impact from project construction or operation will result.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall develop a Noise Complaint Resolution Procedure for handling public complaints during both the construction and operational phases of the proposed project. The procedure shall include, at a minimum, procedures for logging complaints, identifying appropriate contact personnel, responding to complaints, and investigating the causes of complaints. The intent of this procedure is that Basic promptly conduct an investigation to determine the nature and cause of a complaint, and then take reasonable measures to resolve the complaint.

   Verification: No later than 30 days before the beginning of site preparation, Basic shall submit to the CEC staff and the King City Planning Department a procedure for handling public complaints against excessive noise from the facility. Within 15 days of receipt of the procedure, the CEC staff shall notify Basic regarding the acceptability of the procedure.

2. No later than 90 days after the beginning of commercial operations, Basic shall conduct a noise survey at locations that are acceptable to the CEC staff and the King City Planning Department. The Survey will be conducted at a plant load in excess of 90 percent of plant capacity over a continuous 24-hour period with the results reported in terms of L_{dn}, L_{eq}, and CNEL noise levels.

   Basic shall prepare a report of the survey for use in determining the plant's conformance with the provisions of the King City Zoning Ordinance and the State's land use compatibility guidelines. In the event that these criteria are not complied with, the report shall contain details of all pertinent corrective measures as well as schedules for their implementation. Basic shall conduct an additional noise survey within 5 working days of the institution of the corrective measures and report the

results to the CEC staff and the City Planning Department within 15 days of its completion. No additional noise surveys of off-site operational noise shall be required unless the public registers complaints or unless noise from the project is perceived to increase as a result of a change in operation of the facility.

Verification: Within 15 days of completing the initial or any additional noise survey, Basic shall submit a report on the noise survey to the CEC staff and the King City Planning Department. The CEC staff shall notify Basic in writing within 15 days of receipt of the report as to the acceptability of the survey. If the report indicates that further mitigation will be required, the CEC staff shall inform Basic of the disapproval of the mitigation plan within 15 days of the receipt of the report.

3. Basic shall conduct an occupational noise survey no later than 90 days after the beginning of commercial operations to identify all noise-hazardous areas within the facility. The survey shall be conducted by a qualified technician in accordance with the provisions of the California Administrative Code, Title 8, Article 105. The survey results shall be used to determine the magnitude of employee noise exposure. Basic shall prepare a report on the survey results as well as any proposed mitigation measures that will ensure compliance with Cal/OSHA regulations.

   Verification: Within 30 days of completing the survey, Basic shall prepare and submit a report to Cal/OSHA on the results of the noise survey as well as any proposed mitigation measures.

4. Basic shall implement the noise mitigation measures proposed in Exhibit 1 (Sections 10.2.2 and 10.2.3 of the AFC) and Exhibit 13 (response to data request 24).

   Verification: Basic shall include, in the first annual Compliance Report after commencement of commercial operation, information specifying how and where the measures have been implemented. Basic shall make the construction site and power plant site available for inspection by officials of the King City Health Services Department, Cal/OSHA, and the CEC staff.

5. Basic shall limit construction activities to daylight hours (7 a.m. to 7 p.m.), except in cases of emergency. (An emergency is defined for the purpose of this Condition as a situation involving a spill, accident, imminent loss of equipment, or other unforeseen event requiring immediate action to protect employees or the public health and safety.)

   Verification: Basic shall report any noise related emergency to the King City Health Services Department within 24 hours of its occurrence.

F. Socioeconomics

Relevant socioeconomic concerns include the impact of the proposed project on the community's economic base, public services, schools, and housing. While the construction phase will have short-term impacts, the operation of the project will have long-term impacts on the King City area.

During the 15-month construction period up to 140 workers are expected, with an average of 75 workers on the site at one time. Sufficient numbers of workers are available in the 3-county area of Monterey, Santa Cruz and San Benito counties to meet project construction needs (Nov. 6, 1986 RT 111). Most of the workforce is likely to commute to the project site, and adequate short-term housing exists in King City to accommodate those workers who choose to commute on a weekly basis (Nov. 6, 1986 RT 94, 114).

Operation of the proposed project is expected to boost the local economy through the addition of jobs and property tax revenues for the City (Nov. 6, 1986 RT 95, 113, 115-116). Once in operation, the proposed project will create 20 new jobs in the area. Various "worst-case" assessments indicate that, if all personnel were new to the area and each worker's family consisted of 2.37 to 3.24 persons, from 55 to 65 people would be added to the King City population. This represents less than 3 percent of the total population growth expected in the City by 1990 and, therefore, the long-term population impacts are insignificant (Nov. 6, 1986 RT 95, 112-113). During construction worker expenditures, construction supply purchases, and the payment of permit fees will benefit the local economy (Nov. 6, 1986 RT 95). Moreover, the area's local officials and representatives have expressed strong support for

the project (See, e. g., April 10, 1986 RT 34-39; Nov. 5, 1986 RT 261-65; Dec. 23, 1986 RT 82-83; June 11, 1987 RT 26-29, 64-66).

No significant adverse impacts on public services other than schools are expected as a result of this minor population influx. The King City Union School District is currently overcrowded and, without an acceptable mitigation agreement, project operations would cause a significant impact on District schools (Nov. 6, 1986 RT 95, 114-115, 117). The Applicant submitted an executed agreement at the February 23, 1987 hearing (Feb. 23, 1987 RT 4; Exhibit 33) which provides for satisfactory mitigation.

With the implementation of the Condition of Certification below, the proposed project will not cause adverse socioeconomic impacts in the King City area (Nov. 6, 1986 RT 96, 99; Exhibit 12).

FINDINGS

Based upon the evidence of record, the Commission finds:

1. With the implementation of the Condition of Certification, the American 1 project will not cause adverse socioeconomic impacts in the King City area.
2. The American 1 project will generate benefits to the King City economy by increasing employment and tax revenues.
3. Local officials and representatives support the proposed project.

CONDITION OF CERTIFICATION

1. Basic American Foods (Basic) shall implement the school impact mitigation measures specified in the agreement negotiated with the King City Union School District (Exhibit 33) which will be affected by the project.

   Verification: In its initial annual compliance report to the CEC Staff, Basic shall submit a letter from the King City Union School District

verifying that the terms of the agreement for mitigation of project-related school enrollment impacts have been satisfied.

G. Soil Conservation

Construction and operation of the proposed project can lead to accelerated water or wind erosion through the disturbance of vegetation, the decomposition of the soil, and the compaction of the soil by vehicular traffic.

No significant impact on area soils is expected during the 9 months of site grading.[86] The site will be covered with crushed gravel and, where topsoil has been relocated, will be contoured and revegetated (Nov. 5, 1986 RT 198, 209, 212). Runoff from the site will be routed into a permanent sediment retention pond. The drainage system will be designed to control the flow velocity of a 100-year, 24-hour storm and will minimize impacts to soil from the project's construction and operation (Nov. 5, 1986 RT 198-199, 211, 212). Soil loss estimates are well within the soil loss tolerance specified by the Soil Conservation Service (Nov. 5, 1986 RT 198, 209, 210).

The construction of the transmission line will have minimal impacts. The placement of the transmission line poles will require the disturbance of less than 100 square feet of relatively flat ground surface which will be returned to its original condition after construction.

The natural gas pipeline will be located under Metz Road. Only a very small area, vulnerable during the rainy season, will be exposed between the

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86. Testimony on other topics indicates that construction of all project facilities will require 15 months (See, Nov. 6, 1986 RT 109, 143).

road and the project site. This area will be returned to its original condition after placement of the line (Nov. 5, 1986 RT 198, 209, 211-212).

The steam pipeline will be placed in an area of steep terrain and erodable soils which will be vulnerable to erosion during the rainy season. Staff estimated that soil loss for this area would be excessive and that construction of the steam pipeline could have significant impacts on underlying soils (Nov. 5, 1986 RT 208, 209, 212). In order to mitigate this impact, the steam pipes will be buried during the summer months and a vegetative cover will be established on the soil surface before onset of the winter rains.

With the implementation of the Conditions of Certification below, the proposed project will have no significant impacts on area soils (Nov. 5, 1986 RT 201; Exhibit 8).

FINDINGS

Based on the evidence of record, the Commission finds:

1. The construction and operation of the cogeneration facility, the natural gas pipeline, the transmission line, and the steam pipeline will, with the implementation of the Conditions of Certification, create no significant impact to area soils.

2. With the implementation of the Conditions of Certification, the construction and operation of the proposed project will comply with applicable laws, ordinances, regulations, and standards identified in the "Soil Conservation" portion of Appendix A of this Decision.

CONDITIONS OF CERTIFICATION

1. Basic shall not initiate site grading or earthmoving activities at the cogeneration site until an erosion control plan has been submitted to and approved by the CEC staff and the King City Department of Building and

Planning. The plan shall incorporate and depict the following elements in written and graphic form on a construction drawing(s) of appropriate scale:

- o Temporary and permanent storm run-off control ditches
- o All culverts
- o Outfall structures and energy dissipators
- o Areas of storage/disposal for natural gas and water pipeline spoil
- o Areas where fertilizer/mulch will be applied
- o All areas to be seeded/planted and a description of the seed mixture or plant species to be used
- o Areas of excavation and spoil storage for pipe installation (if burial is proposed)

Verification: At least sixty (60) days prior to commencing site preparation, Basic shall file the erosion control plan and construction drawing(s) with the CEC staff and the King City Building and Planning Official for review and approval. Within 30 days of the receipt of this plan and its associated drawings, CEC staff will notify Basic of the acceptance or rejection of the plans by all reviewing agencies.

2. Basic shall minimize soil related impacts by implementing the following measures:

   a. Plant Site Restoration: A local landscape consultant shall be retained to develop a specific plan for seeding and planting.

   b. Backfilling of Topsoil: Topsoil removed during site preparation shall be placed in berms along the western perimeter of the site and spread on the surface along the southern perimeter. Soil shall be smoothed, contoured, and lightly compacted (rolled) at both locations. Appropriate irrigation equipment shall be installed.

      If recommended by a landscape consultant, well-composted manure or the equivalent should be applied at appropriate levels per acre and disked to approximately 4 inches. This is to be done after smoothing and contouring but prior to rolling and installing irrigation equipment.

   c. Fertilizing: A slow-release fertilizer with a nitrogen-phosphorous-potassium ratio of 14-8-8 shall be applied at approximately 80 lbs. per acre. When plants are established (showing new growth in the case of ice plant sprigs), ammonium sulfate (21-0-0) shall be applied to the surface prior to application of erosion control netting. The application shall be approximately 300 lbs. per acre.

   d. Mulching: If inadequate time allows for sufficient establishment of vegetation prior to the rainy season, erosion control should be provided in the form of jute netting stapled in place prior to sprigging with ice plant. Netting need only be applied to berm slopes.

e. Planting: Ice plant sprigs shall be cut at a node and shall be 8 to 10 inches long. These shall be placed about 3 inches deep in a shovel cut, about 12 inches apart.

Water shall be applied liberally to sprigs once a week until winter rains begin. Thereafter, plants shall be watered only as often as necessary to maintain condition. Subsequent applications of fertilizer shall be determined by plant condition as well.

f. Erosion Control During Rainy Season: Gravel shall be applied as cover for bare ground. If necessary, jute netting should be used on landscape berm slopes to reduce erosion until the ice plant sprigs are established.

g. Transmission Line: Construction shall take place during the summer or early fall. Disturbed areas shall be subsoiled to correct compaction in accordance with a landowner agreement.

h. Steam Pipe Installation: If steam pipes are to traverse the Xerothent soils of the escarpment, the following mitigation measures shall be taken:

- o Excavation, burial, and backfilling shall be done in the dry season.
- o The backfilled spoil shall be planted with ice plant sprigs, and fertilized in a manner similar to the screening berm.
- o Jute netting shall be applied to stabilize the soil surface until the ice plant cover is fully established.

i. Gas and Water Pipeline Installation: Excavated soils of that portion of the pipeline not covered by Metz Road or the screening berm shall be covered by plastic prior to backfilling.

Verification: Within 180 days following the commencement of commercial operation, Basic shall file "as-built" engineering plans of the soil measures specified in the erosion control plan with the King City Building and Planning Official and the CEC Compliance Project Manager. An affidavit signed by Basic's project manager shall accompany this filing, identifying the areas or methods which deviate from those identified in the Basic AFC and supporting documents, including the CEC and King City approved erosion control/grading plan.

H. Traffic and Transportation

The construction and operation of the proposed project may impact the traffic flow and circulation patterns as well as the physical condition of area roadways. Construction is expected to take 15 months, peaking with an estimated 140 workers. In a "worst-case scenario" (involving no van or car pooling), construction will add 140 round trips per day on area roads (Nov. 6, 1986 RT 130, 143).

Most workers are expected to take Broadway from US 101 to Metz Road to the site. The permanent workforce due to operation of the plant is estimated at 20, generating a maximum of 40 vehicle trips per day to and from the project site. However, only 3-4 workers will be on each 8-hour shift, thus adding only 3 or 4 trips at peak commute hours (Nov. 6, 1986 RT 130, 131, 143, 146). Broadway, constructed to accommodate truck traffic of legal weight and size and in good condition, currently carries about 9000 vehicles per day, and has a capacity of 6000-11,000 ADT (average daily traffic; Nov. 6, 1986 RT 143-144). Metz Road, which has been rebuilt and resurfaced, has an excess capacity of 1000 vehicles per day (Nov. 6, 1986 RT 140, 144). The additional traffic will not significantly impact the physical condition of, or traffic flow on, these roads (Nov. 6, 1986 RT 130, 144.)

During construction, materials and smaller components will be transported to the project site by flatbed and concrete trucks. City ordinances require these vehicles use designated truck routes and approach the site from Metz Road, from Bitterwater Road, or from the First Street exit off US 101. These routes are currently used by trucks of similar size and weight (Nov. 6, 1986

RT 130, 144). The use of the designated truck routes and the brevity of the construction period will ensure the additional truck traffic generated by project construction does not significantly impact traffic flow (Nov. 6, 1986 RT 130, 144-145).

Deliveries of heavy equipment, such as power generation components and turbine units, are likely to require vehicles exceeding the weight and size of trucks now using the designated truck routes. State and local special permits will be required for such transport. In addition, Caltrans and Monterey County permitting processes will determine the capability of the San Lorenzo Creek bridge on First Street to carry these loads (Nov. 6, 1986 RT 130-131, 145-146). Project operations will also require a monthly truck delivery of ammonia; this will not significantly impact traffic flow (Nov. 6, 1986 RT 131).

Some construction materials and project equipment may be shipped to the site by rail. Unloading at the railroad tracks parallel to, and west of, Metz Road will temporarily disrupt traffic (Nov. 6, 1986 RT 131, 145). The construction of utility extensions and new lines under Metz Road will also temporarily disrupt traffic; however, through-traffic will be maintained during placement (Nov. 6, 1986 RT 131).

The evidence of record thus establishes that the proposed project will not adversely affect the King City area transportation network.

FINDINGS

Based upon the evidence of record, the Commission finds:

1. With the implementation of the Conditions of Certification below, the additional traffic generated by the construction and operation of the American 1 Project will not significantly impact traffic flow or circulation patterns in the area.

2. With the implementation of the Conditions of Certification below, the additional traffic generated by the construction and operation of the American 1 Project will not adversely impact the physical condition of area roads.

3. With the implementation of the Conditions of Certification below, the American 1 Project will comply with the standards, ordinances, and laws set forth in the "Traffic and Transportation" portion of Appendix A of this Decision.

CONDITIONS OF CERTIFICATION

1. Basic shall comply with the California Department of Transportation (Caltrans) and Monterey County restrictions on oversize or overweight vehicles using state, county, or King City roadways. Basic shall obtain overload permits, as necessary, from Caltrans and Monterey County. If project-related oversize loads cannot meet state and local permit requirements for transport, then the equipment must be further disassembled to meet permit conditions, another route must be sought which meets those requirements, or the equipment must be transported to the project site by rail.

   Verification: Basic shall, in its annual compliance report, notify the CEC of any overload permits obtained from Caltrans and Monterey County, or of the alternative transport of heavy equipment to the site by rail.

2. Basic shall comply with the King City encroachment and excavation permit and franchise requirements for installation of utility services (e.g., transmission lines, natural gas pipeline, water service pipeline, wastewater disposal line) of the proposed project in or over city-owned rights-of-way.

   Verification: Basic shall, in its annual compliance report, notify the CEC that the requirements for obtaining encroachment and excavation permits from King City have been satisfied. Basic shall file any required or requested information with King City.

3. Basic shall comply with the King City ordinance regarding use of designated city streets by trucks. Project-related truck traffic shall use First Street to Metz Road when approaching the project site from US 101 and shall use Metz Road when approaching the project site from the north or east. Basic shall specify in its contractual agreements with contractors and sub-contractors which streets into and through King City may be used for the transport and delivery of project-related materials and supplies.

Verification: Basic shall, in its annual compliance report, provide the CEC with copies of its contractual agreements with contractors and subcontractors specifying which city streets are to be used for transport and delivery of project-related materials and supplies.

4. Basic shall enter into the standard contractural agreement with King City to restore to pre-project conditions any areas impacted by project-related truck traffic.

   Verification: Basic shall, in its annual compliance report, provide the CEC with copies of its contractual agreements committing it to restoration and maintenance of city streets impacted by project-related truck traffic.

5. Basic shall place under Metz Road any utility extensions or new water lines required, and through traffic will be maintained on Metz Road during such utility placement.

   Verification: Basic shall, in its annual compliance report, indicate completion of any utility extensions and King City's approval of such extensions.

6. Basic shall comply with applicable transportation safety standards, ordinances, and laws in transporting ammonia to the project site.

   Verification: Basic shall, in its annual compliance report, verify that the regulatory and safety requirements for the transportation of ammonia have been satisfied.

I. Visual Resources

A project's impact on visual resources is determined by evaluating the landscape character of the project site, the sensitivity of viewpoints, and the contrast between the existing background and the proposed project.

The project site is located in a predominantly agricultural area north of King City in the Salinas Valley. It is bordered on the north by the Basic American Foods processing plant, Airport Drive, and the King City Airport; on the west by Metz Road; and on the east and south by agricultural lands (Nov. 6, 1986 RT 164). Because of the lack of uniqueness of the area landscape and the visible existing development, the proposed project will have insignificant impacts on landscape character (Nov. 6, 1986 RT 167).

Viewpoint sensitivity concerns the impact on views from residential areas, travelled roads, and scenic corridors. Although King City and Monterey County have proposed Metz Road, Bitterwater Road, and a future road in the Amstar annexation be designated as scenic corridors, such proposals have not been officially adopted (Nov. 6, 1986 RT 160, 167-168). Metz Road, Bitterwater Road, and Airport Road have foreground views (0-0.5 miles) of the project site, but these roads are not heavily travelled (Nov. 6, 1986 RT 164, 168, 169). Most of the residential areas will have only a middleground (0.5-3.0 miles) view of the proposed facility (Nov. 6, 1986 RT 165, 169).

Visual contrast involves the contrast between the existing landscape and structures and the proposed facility. The components of the project which will impact visual resources are the cogeneration plant itself, including two

80-foot stacks, and the transmission line. The proposed project will be visible from west and south of the project site. Most foreground views of the project site will be backdropped by the Basic American Foods processing plant and the bluffs. Because of the height of the stacks and the proximity of the viewer to the facility, the cogeneration facility will moderately contrast with the landscape (Nov. 6, 1986 RT 159, 169,).

The northern residential areas of King City and a 1-mile stretch of Highway 101 will have predominantly middleground views of the project site. Due to the greater distance from the site, the contrast with these views is low (Nov. 6, 1986 RT 159, 169). The cooling towers will emit a steam plume which will be visible only infrequently, creating a minimal visual contrast. Night time illumination of the facility will blend with that of the existing processing plant, similarly creating only an insignificant visual contrast (Nov. 6, 1986 RT 159, 169).

Transmission line Route 1 will follow and incorporate an existing transmission line along the Southern Pacific Rail Road. This route will not create any significant new visual contrast or change in landscape character (Nov. 6, 1986 RT 165, 169-170).

FINDINGS

Based on the evidence of record, the Commission finds:

1. The proposed project will have insignificant impacts on the landscape character of the area.
2. The proposed project will have insignificant impacts on viewpoint sensitivity in the area.

3. With the implementation of the Condition of Certification set forth below, the project will comply with applicable ordinances identified in the "Visual Resources" portion of Appendix A of this Decision, and will create insignificant visual impact in the area.

CONDITION OF CERTIFICATION

1. To reduce the visual contrast of the proposed project, Basic American Foods shall:

   a. paint all structures, stacks, and tanks a color that will blend in with the bluff north of the site.

   b. plant vegetation where possible along the cogeneration site's western boundary, using plant species consistent with the forms and color of species in the site area. Total landscaping shall occupy approximately 10 percent of the total land area of the project.

   c. use night time illumination of the project that is consistent with that of adjacent facilities.

Verification: Thirty days after project completion, Basic shall submit a letter to the CEC staff verifying compliance with these Conditions.

J. Water Quality

The proposed project may impact water quality. Surface waters may be degraded by runoff or effluents from the project site, and groundwater supplies and natural aquifers may be affected by the discharge of wastes or consumption of groundwater.

Area groundwater resources are adequate to accommodate the 0.96-1.27 million gallons per day (mgd) which will be required for the project (Nov. 6, 1986 RT 247-249; see also, discussion on Water Resources, infra).

Because the site lies in an arid region and is relatively flat, very little runoff is expected during construction of the project. Runoff that does occur will be routed to an existing sump pond at the northwest of the project site, and will eventually be emptied onto an open field (Nov. 6, 1986 RT 227). After construction, runoff will be routed to a permanent retention pond designed to accommodate runoff from a 10-year, 24-hour storm. Storm water routing facilities (ditches and culverts) will be designed to control the velocity of runoff of a 100-year, 24-hour storm. Oil skimmers or oil/water separators will be installed to clean wastewater and runoff of grease and oils (Nov. 6, 1986 RT 227-228, 252, 254).

Project operations will discharge about 0.45 mgd of wastewater to the King City Industrial Publicly-Owned Treatment Works (POTW) which is currently operating near capacity. King City has applied to the Regional Water Quality Control Board (RWQCB) for a permit to modify the treatment facilities in order to accommodate this added discharge, and Basic has applied to the RWQCB in order to modify its current discharge permit (Nov. 6, 1986 RT 228-229, 249).

Because the wastewater from the cogeneration project will be reused, the concentration of trace elements will increase. Although Staff originally expressed some concern over the potential of these elements to exceed applicable water quality standards the evidence establishes that, with the implementation of the monitoring requirement below, no significant impacts on water quality are expected to result from project operations (Nov. 6, 1986 RT 229, 236, 257; Exhibit 14).

FINDINGS

Based upon the evidence of record, the Commission finds:

1. With the implementation of the Conditions of Certification, the American 1 Cogeneration Project will not create significant adverse impacts upon regional water quality.

2. With the implementation of the Conditions of Certification, the proposed project will be in compliance with the laws, standards, ordinances, and regulations listed in the "Water Quality" portion of Appendix A of this Decision.

CONDITIONS OF CERTIFICATION

1. Basic American Foods (Basic) shall submit to the RWQCB and CEC staff, for review and approval, final specifications for the waste discharge permit modification and any associated requirements for upgrading the Industrial POTW. These specifications shall demonstrate compliance with MCL's, at a minimum for barium and selenium, and with Irrigation Water Quality Objectives for fluoride. Basic shall also implement a monitoring plan approved by CEC staff to ensure compliance with Central Coast RWQCB requirements for barium, selenium, fluoride, and all other applicable parameters.

   Verification: Basic shall submit, at least 180 days prior to commencement of construction, specifications for revising the present waste discharge permit, including requirements due to increased volumes of effluent which may require King City to upgrade its existing Industrial POTW, and the monitoring plan. The CEC staff shall respond in writing to Basic within 60 days regarding the adequacy of the required submittals.

2. Basic shall perform the following:

   a. Design and install an on-site retention pond and associated on-site drainage system designed to accommodate a 10-year, 24-hour storm event;

   b. Design and install an oil-grease skimmer for installation at the retention pond outlet;

   c. Design and install all culverts, ditches, or other water routing facilities to accommodate a 100-year, 24-hour storm runoff and include erosion protection measures to prevent scouring of earthen channels by reducing water velocities to 2.0 ft/sec or less;

   d. Periodically maintain storm drainage facilities and remove sediment from the retention pond.

Verification: At least sixty (60) days prior to the start of construction, Basic shall submit to the City of King Public Works Department and the CEC Compliance Project Manager the design drawings and plans regarding items (a) through (d) above.

The CEC staff will coordinate review of the proposed design and plans and within 30 days will inform Basic in writing either that the proposed designs and plans are acceptable or specify necessary changes.

K. Water Resources

Concerns addressed in this topic area are whether the proposed project will be subject to flooding, and whether it will affect the groundwater supply or river recharge in the area.

The evidence establishes the project site is not vulnerable to flooding (Nov. 6, 1986 RT 270, 284).

Applicant will drill two new wells to supply the 0.96-1.27 million gallons per day (mgd) required for project operations. Demand will be lowest in the summer when there is the highest water demand on local well resources and when recharge of rivers is lowest. Groundwater supplies in the area are sufficient to meet this demand without adversely affecting nearby wells or other water uses. Because pumping from the proposed wells is less than 25 percent of the typical 2000 gpm rate pumped by many irrigation wells in the area, the project will not significantly impact water supply systems or river recharge (Nov. 6, 1986 RT 270, 282-283, 285).

Site drainage is to the northwest where the proposed retention pond will be located. An 18-inch on-site pipe will control the velocity of a 100-year, 24-hour storm, and the pond will have the capacity to accommodate runoff from a 10-year, 24-hour storm. Runoff will drain through a culvert under Metz Road to a flat field without contributing to area flooding. Sediment discharge during construction is expected to be 180 cubic feet/year, or less than 5

percent of the retention pond's capacity (Nov. 6, 1986 RT 270, 283-284). Condensate from the processing plant will be reused, and the non-recyclable waste water will be treated and used for spray irrigation (Nov. 6, 1986 RT 285).

Overall, the evidence indicates that the proposed project will not significantly impact area water resources (Nov. 6, 1986 RT 275; Exhibit 15).

FINDINGS

Based upon the evidence of record, the Commission finds:

1. With the implementation of the Conditions of Certification listed in the "Water Quality" section of this Decision, the proposed project will not cause adverse impacts on water resources.

2. The proposed project will neither cause nor be exposed to flood hazards.

3. With the implementation of the Conditions of Certification listed in the "Water Quality" section of this Decision, the proposed project will comply with the applicable standards, laws, regulations, and ordinances listed in the "Water Resources" portion of Appendix A of this Decision.

L. Decommissioning

Decommissioning will likely be triggered by the expiration of the project's 30-year power purchase contract (Nov. 5, 1986 RT 309, 318). The eventual removal of the proposed project from service could have adverse effects on public health, safety, and the environment.

The proposed project consists of the cogeneration plant located on a 7-acre site, a 3.2 mile transmission line, and other appurtenant facilities including water, gas, and steam pipelines. Options for decommissioning these facilities range from deactivating and mothballing the facilities to restoring the site to its natural state (Nov. 5, 1986 RT 305, 313).

In order to ensure that decommissioning does not create adverse impacts, this action should be preceded by considering available options and the applicable laws, ordinances, regulations, and standards in existence at that time. Staff and Applicant agree that decommissioning the project shall be preceded by the submission of a decommissioning plan. This plan shall identify and analyze decommissioning alternatives, and identify and discuss how the activities will comply with applicable laws and regulations (Nov. 5, 1986 RT 305, 313).

Implementation of the following Condition of Certification will reasonably assure protection of the public health, safety, and the environment upon the decommissioning of the project (Nov. 5, 1986 RT 305, 311).

FINDING

Based on the evidence of record, the Commission finds:

1. With the implementation of the Condition of Certification, the decommissioning of the American 1 Cogeneration Project can be anticipated, and a plan developed, in order to ensure that the decommissioning will have no significant impacts on public health and safety or the environment, and that reasonable efforts will be made to ensure such action is in compliance with the laws, ordinances, regulations, and standards applicable at that point in time.

CONDITION OF CERTIFICATION

1. Prior to commencing decommissioning activities, Basic American Foods shall file a decommissioning plan with the California Energy Commission (CEC) for approval. The decommissioning plan shall:

   a. Identify and discuss the proposed decommissioning activities and schedule for the power plant site; transmission line; water, gas, and steam pipelines; fuel oil unloading facility; and all other appurtenant facilities constructed as part of the project.

   b. Identify all laws, ordinances, standards, and local/regional plans applicable to decommissioning in existence at the time of decommissioning.

   c. Discuss how the specific proposed decommissioning activities will comply with these standards, ordinances, and laws.

   d. Contain an analysis of all decommissioning alternatives considered, specifically including the alternative of restoration to a natural state.

   e. Discuss the reasons for selecting the proposed alternative.

   Prior to submittal of the decommissioning plan, a prefiling workshop shall be held between Basic American Foods and CEC staff for the purpose of determining the specific contents of the plan.

   In the event that significant issues are associated with the plan's approval by the CEC, or depending upon the desires of local officials or interested parties, the CEC may hold workshops and/or public hearings as part of its review and approval procedure.

   Basic American Foods shall not commence decommissioning activities until CEC approval of the decommissioning plan is obtained, and Basic American Foods shall comply with any requirements the CEC may incorporate as a condition of approval of the decommissioning plan.

   Verification: At least 12 months (or other mutually agreed upon time) prior to commencing decommissioning activities at the American 1 Cogeneration facility or appurtenant facilities, Basic American Foods

shall concurrently file the decommissioning plan with the CEC, the King City Planning Department, and other interested agencies. At least six months (or other mutually agreed upon time) prior to filing the decommissioning plan, Basic American Foods shall request in writing that CEC staff schedule a prefiling workshop to determine specific contents of the plan.

APPENDIX A

Following are the Standards, Ordinances, Regulations, and Laws identified as applicable to the American 1 Cogeneration Project.

AIR QUALITY

Federal

- Title 40, Code of Federal Regulations (CFR), Part 51, section 51.24 and Part 52, section 52.24. Sources subject to Prevention of Significant Deterioration (PSD) review by EPA are major stationary sources or major modifications to stationary sources located in attainment or unclassifiable areas for federal ambient air quality standards. The PSD regulations establish the acceptable levels of deterioration in these attainment or unclassified areas, i.e., Class I, Classs II and Class III areas. National parks and wilderness are examples of Class I areas where practically any deterioration is considered significant. Class II areas are areas where moderate, well controlled and sited industrial growth can be permitted, while Class III areas are areas which allow greater growth (there are no Class III areas in California). The proposed project site is located in a Class II area.

  Prevention of Significant Deterioration review requires a demonstration of compliance with federal Best Available Control Technology (BACT) requirements, an air quality impact analysis and an additional air quality analysis of the effects of the proposed project on area growth, soils, vegetation and visibility.

- Title 42, United States Code (USC), Sections 7410 and 7503 (Clean Air Act of 1977 (CAA)). In nonattainment areas for federal ambient air quality standards, Section 7410 of the CAA requires that the state implement a plan which provides for the attainment of said standards as expeditiously as practicable but not later than December 31, 1982. Section 7503(1)(A) and (B) establishes the requirements of a nonattainment permitting program. Included is the condition that permits to construct and operate may be issued only if the permitting agency determines that the total allowable emissions from existing and new sources, along with the emissions from the proposed facility, will be sufficiently less than the total emissions from existing sources allowed under the implementation plan prior to the application for such permit, so as to demonstrate reasonable further progress toward achieving the ambient air quality standards.

State

- California Environmental Quality Act (CEQA). CEQA requires the lead agency to fully assess the environmental impacts of each project and to consider the implementation of feasible mitigation measures to prevent any potential significant impacts. State CEQA Guidelines Title 14, California Administrative Code, Section 15002 (a)(3) states that the basic purpose of CEQA is to "prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible."

State CEQA Guidelines Section 15382 defines a "significant effect on the environment" as a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." Further, State CEQA Guidelines Section 15064(i) states that "if an air emission or water discharge meets the existing standard for a particular pollutant, the Lead Agency may presume that the emission or discharge of the pollutant will not be a significant effect on the environment."

- California Health and Safety Code, Section 41700. This code section requires that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

Local

The proposed project is located within the jurisdiction of the MBUAPCD. Therefore, the rules and regulations of the MBUAPCD are also applicable.

- Rule 205, Provision of Sampling and Testing Facilities. This rule requires sampling and testing facilities be provided and maintained.

- Rule 206, Standards for Granting Applications. This rule provides standards for granting an Authority to Construct including: a) limitations on air contaminant emissions and compliance with Section 41700 or 41701 of the State Health and Safety Code, and b) requirements of sampling and testing facility specifications.

- Rule 207, Review of New or Modified Sources. This rule establishes threshold limits for regulated pollutants from all new major stationary sources and requires the application of BACT and offsets to each pollutant which exceeds its threshold limit. In addition, analyses of visibility, soils, vegetation and air quality impacts are required.

  Rule 207, Part 3.2 defines air quality increment as an increment of allowable air quality degradation, beyond baseline, as established by the District Board and at least as stringent as provided in the Clean Air Act provisions in Section 163(b). For pollutants with no established increment pursuant to the Clean Air Act, an increment of allowable air quality degradation is established by the District Board.

  Rule 207, Part 3.12 defines emissions increment as the increase in emissions of any pollutant which can be allowed in an area without causing the exceedance of any air quality increment.

  Rule 207, Part 4.1.1 requires BACT to be applied to a new stationary source which emits more than any one of the following affected

pollutants: 150 pounds per day (lbs/day) of reactive organic compounds (ROC), NO_x, sulfur oxides (SO_x) or particulate matter (PM); 550 lbs/day of CO; 3.28 lbs/day of Pb; 0.04 lbs/day of asbestos; 0.0022 lbs/day of beryllium (Be); 0.55 lbs/day of mercury (Hg); 5.48 lbs/day of vinyl chloride; 16.44 lbs/day of fluorides (F); 38.35 lbs/day of sulfuric acid mist (H_2SO_4 mist); and 54.79 lbs/day of hydrogen sulfide (H_2S), total reduced sulfur or reduced sulfur compounds (including H_2S).

Rule 207, Part 4.2.2 requires offsets to be applied to an affected pollutant from a new or modified stationary source with a net emissions increase exceeding 150 lbs/day of ROC, NO_x, SO_x or PM, or 550 lbs/day of CO.

Rule 207, Part 4.2.3 provides for an exemption from offsets for increases in CO emissions, if use of the impact table contained in Rule 207, Part 9.4 demonstrates that ambient air quality will not be violated.

Rule 207, Part 4.2.5 states that offsets, if required, be provided at least equal to the net emissions increase from the new source or modification for any increase in emissions of the following pollutants: ROC, NO_x, SO_x and PM. This rule also identifies the provisions by which the Air Pollution Control Officer (APCO) may exempt a source from offset requirements for all the attainment pollutants and any nonattainment pollutants which do not exceed levels specified in Part 4.2.2 of Rule 207. The exemption may be granted provided that the Applicant demonstrates to the satisfaciton of the APCO that: offsets will result in little or no air quality benefit; emissions offsets are not available or would not be cost-effective; and net emissions increases from the new or modified stationary source, in conjunction with other increases in emissions, will be consistent with reasonable further progress and will not cause a violation of any ambient air quality standard or exceed any air quality increment.

Rule 207, Part 4.3.3.3 provides that the Air Pollutant Control Officer (APCO) may allow an Applicant to use up to 50 percent of the remaining emissions increments (for attainment pollutants only) if the Applicant demonstrates to the satisfaction of the APCO that sufficient offsets do not exist at sources owned by the Applicant and are not available at other sources within a 15-mile radius or in an upwind area.

Rule 207, Part 7 identifies the Determination of Compliance review which is equivalent to an Authority to Construct review for siting a power plant. It also specifies the requirement of a Permit to Operate review by the District after the stationary source is in operation.

- Rule 400, Ringlemann Chart. This rule limits visible emissions to no greater than Ringlemann 1 for more than 3 minutes in any one hour.

- Rule 402, Nuisance. This rule limits the release of air contaminants which may cause injury, detriment, nuisance or annoyance to any considerable number of persons.

- Rule 404, Sulfur Compounds and Nitrogen Dioxides. This rule limits the discharge of SO_2 to 0.2 percent by volume, and limits nitrogen dioxides emissions (NO_2) to 140 lbs/hr. It also limits the NO_2 to 250 ppmvd, at 3 percent O_2 for fuel burning equipment with maximum heat inputs of more than 1.5 MMBtu/hr.

- Rule 412, Sulfur Content of Fuels. This rule limits hydrogen sulfide (H_2S) in fuel gas to 50 grains per 100 cubic feet and the sulfur content of liquid fuel to 0.5 percent by weight.

- Rule 417, Storage of Organic Liquids. This rule requires all storage tanks of more than 39,630 gallons capacity which store organic liquids having a true vapor pressure of 1.5 pounds per square inch absolute (psia) or higher to be equipped with a vapor control device.

- Rule 423, New Source Performance Standards. This rule includes general provisions about the date of construction commencement, continuous monitoring, date of start-up of the facility and record keeping. Provisions regarding the operation of the facility, monitoring and performance tests are also included in this rule. Particulate matter emissions are limited to 0.10 pounds per million British thermal units (lb/MMBtu) heat input when derived from burning fossil fuel. Sulfur dioxide emissions are limited to 0.8 lb/MMBtu heat input when liquid fossil fuel is burned. Nitrogen oxides emissions, expressed as NO_2, are limited to 0.2 lb/MMBtu heat input when firing gaseous fuel and 0.3 lb/MMBtu heat input when firing liquid fuel. The rule prohibits discharge of gases into the atmosphere which exhibit 20 percent opacity or greater, except that a maximum of 40 percent opacity shall be permissible for not more than two minutes in any one hour.

AMMONIA SAFETY

Federal

- Title 29, Code of Federal Regulations (CFR), Chapter XVII (including Section 1910.111, Storage and Handling of Anhydrous Ammonia).

State

- Title 8, California Administrative Code (CAC), Chapter 4, Subchapter 7 Safety (Industrial Safety Orders). Applicable sections include:

  - Article 107 - Dust, Fumes, Mists, Vapors and Gases
  - Article 109 - Hot, Flammable, Poisonous, Corrosive and Irritant Substances
  - Article 145 - Design, Construction and Installation of Venting, Diking, Valving and Supports

- Section 3203 - Operation; Accident Prevention Program

- Articles 134 to 146, Group 20 - Flammable Liquids, Gases and Vapors

- Articles 156 to 163, Group 27 - Fire Protection

o Title 22, California Administrative Code (CAC), Chapter 30, Article 11 (Classification of Containers of Hazardous Chemicals).

o Title 8 of the California Administrative Code (CAC), Industrial Relations, Chapter 4, Subchapter 1, Article 6 (Anhydrous Ammonia).

o Title 8, CAC, Chapter 4, Subchapter 4, Section 1509 (General Safety Orders).

Industry Codes and Standards

o American Concrete Institute (ACI), 349-80, Appendix B. Foundations for Welded Steel Tanks

o American Society of Mechanical Engineers (ASME)

- Section VIII - Boiler and Pressure Vessel Code

o National Fire Protection Association (NFPA) Standards

- NFPA 10 - Portable Fire Extinguishers
- NFPA 13 - Installation of Sprinkler Systems
- NFPA 15 - Water Spray Fixed System
- NFPA 26 - Supervision of Valves
- NFPA 30 - Flammable and Combustible Liquids Code
- NFPA 70 - National Electric Code
- NFPA/NEC - Class I, Division II, Group D Hazardous Area Designation

o American National Standards Institute, Inc. (ANSI), ANSI K61.1 - Safety Requirements for the Storage and Handling of Anhydrous Ammonia (1981).

BIOLOGICAL RESOURCES

Federal Laws

o Endangered Species Act of 1973 and implementing regulations, 16 USC 153 et seq., 50 CFR Part 17. Designates federally threatened and endangered plants and animals and their critical habitat.

State Laws

o California Species Preservation Act of 1970, Fish and Game Code, Section

900-903. Preserves, protects, and enhances the birds, mammals, fish, amphibia, and reptiles of California.

- California Endangered Species Act of 1984, Fish and Game Code, Sections 2050-2098. Protects California endangered, threatened, and rare species.

- California Administrative Code (CAC) Title 14, Division 1, Part 3, Chapter 3, Section 670.5. Lists animals of California declared to be rare or endangered.

- Fully Protected Species. Fish and Game Code, Division 4, Part 2, Chapter 1, Section 3511. Lists animals that are fully protected in California.

- Native Plant Protection Act of 1977, Fish and Game Code Section 1900 et seq. Designates state endangered and rare plants and provides specific protection measures for identified populations.

CIVIL ENGINEERING

Federal

- U.S. Environmental Protection Agency (EPA), 40 CFR 112, Spill Control and Countermeasure (SPCC) plan. Required of facilities storing oil in excess of: 660 gallons in any single above ground storage tank; 1,320 gallons in aggregate tanks above ground; 4,200 gallons below ground.

State

- Business and Professions Code, Chapter 7, Division 3. Requires state registration to practice as a civil engineer in California.

- California Administrative Code, Title 24, parts 2-6. Adopts the Uniform Building Code (UBC) as minimum legal building standards.

- CAC, Title 8, Sections 340 and 341. California State Department of Industrial Safety, Cal-OSHA. A permit is required prior to construction of trenches or excavations five (5) feet or deeper into which personnel have to descend. This also applies to construction or demolition of building, structure, falsework or scaffolding more than three stories high or equivalent.

- CAC, Title 8, Chapter 4, Division of Industrial Safety. Describes general construction safety orders, industrial safety orders, and work safety requirements and procedures.

- Vehicle Code section 35780; Streets and Highway Code sections 117 and 660-711; California Department of Transportation (Caltrans) requires a permit to transport heavy loads on state roads.

- Street and Highway Code section 708 - Crossing permit. Authorization is required, from Caltrans, for new transmission lines crossing state roads.

- Warren-Alquist Act (WAA), Public Resources Code section 25532. Establishes monitoring programs to assure that construction complies with the applicable laws, ordinances and standards.

- Rule 145, California Board of Professional Engineers. Requires that a California Registered Engineer work only within his or her area of professional competence.

Local

- City of King -- Ordinance No. 470, Building permits, City of King Building and Planning Department. Construction of new structures must conform with 1982 Edition of the Uniform Building Code.

- City of King - Title 17, City of King Municipal Code, Architectural and site review. A review of the site plans is required to ensure compliance with zoning restrictions, city development plans and concepts.

- County of Monterey - (Transmission line - Utility pole and access roads). County adopts Titles 17 and 24 of California Administrative Code. Encroachment permits are required for construction of transmission line-utility poles and drive ways crossing or accessing county roads.

Industry Codes and Standards

General

- Uniform Building Code, 1985 edition (UBC-1985).

- Uniform Building Code Standards, 1985 edition (UBCS-1985).

- Uniform Plumbing Code (UPC) 1985 Edition for design, sizing and construction of Sanitary Sewer Systems.

Concrete: (Construction of Secondary Containment Facilities)

- ACI - American Concrete Institute

  - 318-83 - Building Code Requirements of Structural Reinforced Concrete.

  - 318.1-83 - Building Code requirements of Structural Plain concrete.

- ASTM - American Society for Testing and Materials

  - A82-79 - Cold-drawn Steel Wire Fabric for Concrete Reinforcement

  - A185-79 - Welded Steel Wire Fabric for Concrete Reinforcement.

- A615-82 - Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.

o UBC-85 - Uniform Building Code, 1985 Edition, Chapter 26, Concrete. If conflicts between ACI and UBC occur the most stringent requirements will govern.

o CALTRANS - California State Department of Transportation Standard specifications, July 1984, Section 39 - Asphalt Concrete.

Culverts and Stormdrains

o ASTM - American Society for Testing and Materials.

- C76-85 - Reinforced concrete culvert, storm drain and sewer pipe.

- C478-85 - Pre-cast Reinforced Concrete Manhole Sections.

o CALTRANS - California Department of Transportation Standard Specifications, July 1984.

- Section 61 - Culvert and Drainage Pipe Joints

- Section 66 - Corrugated Metal Pipe

Structural Backfill, Liners and Embankments

o ASTM - American Society for Testing and Materials

- D422-632 - Particle Size Analysis of Soils

- D1556-82 - In-Place Density of Soils by the Sand-Cone Method

- D1557-78 - Moisture-density Relations of Soils and Soil Aggregate Mixtures

- D2487-69 - Soil Classifications

- D2922-81 - In-Place Moisture Content and Density of Soils by Nuclear Methods

o USACE - United States Army Corp. of Engineers

- std EM - Permeability of Fine Grained Soils - Clay liner
- 1110-Z-1906

Truck Loads

o AASHTO - American Asociation of State Highway and Transportation

Officials

HB-12-77 - Standard Specifications for Highway Bridges Twelfth Edition, 1977. HS20-44 Loading

- CALTRANS - Standard Specifications, Caltrans, 1984 Edition with updates. Contains specification, standards and details of civil highway construction.

Fences and Gates

- CALTRANS - California State Department of Transportation Standard Specifications, July 1984, Section 80-4, Chain Link Fence.

CULTURAL RESOURCES

- Title 14 of the California Administrative Code (Section 15000 et seq., in particular Section 15126, Appendix G, Subdivision (j), and Appendix K, concerning human remains.

ELECTRICAL ENGINEERING

- American National Standards Institute (ANSI). Contains requirements for valves, piping, and electrical equipment.
- Institute of Electrical and Electronic Engineers (IEEE). Contains requirements for electrical equipment.
- Insulated Cable Engineers Association (ICEA). Contains requirements for cables.
- National Electrical Manufacturers Association (NEMA). Contains requirements for electrical equipment.
- American Society for Testing and Materials (ASTM). Establishes requirements for materials and testing of wires, cables, and cable trays.
- National Electric Code (NEC). Determines the practical safeguarding of persons and property from hazards arising from the use of electricity.
- Underwriters Laboratory (U/L). Establishes safety standards for electrical equipment and components.
- Factory Mutual (FM). Establishes testing standards for safety of mechanical equipment.

- Occupational Safety and Health Administration (OSHA). Sets safety regulations for the project.

- Title 24, California Administrative Code, State Building Code Standards, Part 2, State Building Code, Chapter 2-53, Division 3, Energy Conservation Standards; Chapter 2-61, Special Electrical Systems.

- Title 24, California Administrative Code, State Building Standards, Part 3, State Electrical Code.

ENGINEERING GEOLOGY

- California Business and Professions Code § 7835. Requires registration for geologists and specialty geologists (including engineering geologists) who practice for others.

- Uniform Building Code (UBC), 1985 edition, Chapter 29 (Foundations) and 70 (Excavation and Grading). Sets minimum technical and administrative requirements for foundations and for excavation and grading.

LAND USE

- City of King, Land Use/Circulation Element and Open Space Element of the General Plan, June 1973

- City of King, Zoning Ordinance, August 1982

- Monterey County, General Plan, Land Use Plan Map, September 1982

- Monterey County, Central Salinas Valley Planning Area Inventory and Analysis, June 1983

- Monterey County, Zoning Code, 1955

MECHANICAL ENGINEERING

Federal

- Federal Occupational Safety and Health Administration
  - 29 USC, Section 655 et seq.
  - 29 CFR Section 1910

State and Local

- o California State Department of Industrial Relations, Division of Industrial Safety
  - Labor Code Sections 7621, 7680, 7683, 7300 et seq.
  - Labor Code 6500 Admin. Code, Title 8, Sections 340 to 341
- o State of California Division of Industrial Safety (Cal-OSHA)
  - 8 California Administrative Code, Chapter 4, Subchapter 4, Construction Safety Orders
  - 8 California Administrative Code, Chapter 4, Subchapter 5, Electrical Safety Orders
- o Title 24, California Administrative Code, Division 5
- o Title 20, California Administrative Code, Chapter 7, Division 3 (requires state registrations to practice as a mechanical engineer in California)
- o Title 8, California Administrative Code, Chapter 4, Subchapter 1, Article 6
- o California Public Utilities Commission (CPUC), General Order 95
- o City of King Planning Commission and City Council
  - Review of the Application
- o City of King Fire Department
  - California Administrative Code, Title 8, Chapters 4 through 7
- o City of King Building and Planning Department Ordinances
  - Public Works Department - Adoption of the Uniform Building Code

Industrial Codes and Standards

- o Manual of Industry Standards
- o American Society of Mechanical Engineers (ASME) - Boiler and Pressure Vessel Code.
- o American Welding Society Standards (AWS) - Structural Welding Code (AWSD 1.1)
- o Uniform Building Code and Standards
- o National Building Code
- o Basic Building Code
- o Uniform Mechanical Code
- o Basic Mechanical Code
- o American Institute of Steel Construction Standards (AISC)
- o American Iron and Steel Institute Manuals and Standards
- o American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
- o American Society for Testing and Materials (ASTM)

- o American Concrete Institute Manual of Concrete Practice (ACI)
- o National Electrical Code
- o National Electrical Manufacturers Association Standards
- o Institute of Electrical and Electronics Engineers Standards
- o Underwriters Laboratories, Incorporated, Standards
- o Uniform Plumbing Code, International Association of Plumbing and Mechanical Officials (IAPMO)
- o Hydraulic Institute Standards (HI)
- o American Water Works Association Manuals and Standards (AWWA)
- o American Petroleum Institute Standards (API)
- o American Association of State Highway and Transportation Officials (AASHTO)
- o Asphalt Institute Manuals (AI)
- o Uniform Fire Code and Standards
- o National Fire Protection Association (NFPA) Codes (1985 edition):
  - Volume 1, NFPA 10, Portable Fire Extinguisher; NFPA 12, CO_2 Systems; NFPA 12A, Halon 1301 Systems; NFPA 12B, 1211 Halon Systems
  - Volume 2, NFPA 13, Sprinkler Systems, Installation; NFPA 14, Standpipe and Hose Systems - Class II Service; NFPA 15, Water Spray Fixed Systems; NFPA 20, Centrifugal Fire Pumps; NFPA 24, Private Fire Service Mains and their Appurtenances.
  - Volume 3, NFPA 30, Flammable and Combustible Liquids Code; NFPA 37, Stationary Combustion Engines and Gas Turbines.
  - Volume 6, NFPA 70 (National Electrical Code), Electrical Conductors and Equipment Installed With or on Public and Private Buildings, to a Supply of Electricity.
  - Volume 4, NFPA 214, Water Cooling Towers.
  - Volume 6, NFPA 1961, Fire Hose; 1963, Fire Hose Connections; Care Maintenance and Use of Fire Hoses (1962 ed.).
  - Volume 7, NFPA 26, Water Supplies, Valves Controlling.
- o Fan Application Manual, Air Moving and Conditioning Association, Inc. - AMCA

- Laboratory Methods of Testing Fans for Rating
  - ASHRAE 51, AMCA 210
- Diesel Engine Manufacturers Association Standards
- Gas Turbine-Driven Generators
  - ANSI C50.14
  - ANSI B31.1
  - AWS D1.1
  - ASME Section VIII
- Compressed Air and Gas Handbook
- Test Code for Compressor and Exhausters
  - ASTM PTC 10
- Standards for Steam Surface Condensers
- Cooling Tower Institute Standards (CTI)
- Crane Manufacturers Association of America
- Hoist Manufacturers Institute Standards
- Standards of Tubular Exchangers Manufacturer's Association Standards
- Heat Exchange Institute Standards (HEI)
- Power Piping
  - ANSI B31.1
- Fuel Gas Piping
  - ANSI B31.2
- National Fuel Gas Code
  - NFPA 54
- Expansion Joint Manufacturers Association
  - EJMA
- Steam Turbines for Mechanical Drive Service
  - NEMA SM-23
- Generators, Steam Turbine-Driven
  - ANSI C50.13

- Manufacturer Standardization Society of the Valves and Fittings Industry Standards
  - MSS

In addition, Staff identified the following codes and standards:

- National Fire Protection Association

  - Air Conditioning and Vent Systems #90A
  - Blower and Exhaust Systems #91
  - Life Safety Code #101

- American National Standard Institute

  - Section B31.4 - Liquid Petroleum Transportation Piping System
  - Section B31.5 - Refrigeration Piping
  - Section B31.8 - Gas Transmission and Distribution Piping System
  - Section A13.1 - Scheme for Identification of Piping Systems

- American Petroleum Institute Standards:

- Reciprocating Compressor -	API 618
- Centrifugal Air Compressor -	API 617
	API 614
	API 670
- Steam Turbine	API 611
	API 612
	API 614
- Centrifugal Pumps	API 610
	API 614
- Combustion Gas Turbine	API 614
	API 616
	API 670
- Storage Tanks	API 650
	API 620

NOISE

Federal

- Occupational Safety and Health Act (OSHA) of 1970 (29 CFR 1910 et seq.). This Act establishes federal worker standards that will be applicable to employees of the proposed facility but not to any residents of the area. The allowable exposure levels are presented in Staff's testimony, Noise: Table 4 (Nov. 6, 1986 RT 196).

- Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Environmental

Protection Agency (EPA 1974). This guideline identifies an L_{dn} of 55 dBA as providing reasonable protection against annoyance and outdoor activity interference due to noise for residential areas, farms, outdoor areas where people spend widely varying amounts of time, and other places where quiet is a basis for use. The guideline level is not enforceable and is presented without regard to the cost or feasibility of achievement.

- Site Acceptability Standards. U.S. Department of Housing and Urban Development (HUD). These standards establish criteria for determining the acceptability of noise environments at housing projects assisted by HUD. The goal is to meet the EPA guideline level of L_{dn} = 55 dBA. However, the current standard is an L_{dn} of 65 dBA or less (24 CFR 51).

State

- Land Use Compatibility Guidelines. California Department of Health, Office of Noise Control (1976). These guidelines have been published to provide guidance for local officials in evaluating land use compatibility with various sound environments (Noise: Table 5).

- General Industrial Safety Orders. California Department of Industrial Relations. (Title 8, California Administrative Code, Subchapter 7, Article 105). These state standards are the same as the OSHA standards (Noise: Table 4 [Nov. 6, 1986 RT 196]) for protecting workers from excessive noise exposures in the work place.

Local

- King City Zoning Ordinance. The allowable noise limits are summarized below:

Land Usage	Maximum Sound Level (dBA) Daytime	Nighttime
Residential	60	55
Commercial	70	65
Industrial	73	68

PUBLIC HEALTH

General

- The California Health and Safety Code (HSC), Section 41700. This code prohibits the discharge, from any source whatsoever, of such quantities of air contaminants or other material which cause injury, detriment,

nuisance, or annoyance to the public, or which endanger the comfort, repose, health, or safety of individuals or the public.

Criteria Air Pollutants

- Air quality standards for criteria pollutants are established primarily to protect public health and welfare. The goal of these standards is to provide an adequate margin of safety to protect public health.

Noncriteria Pollutants

- California Health and Safety Code, Sections 39650 to 39674. This code mandates the California Air Resources Board (CARB) and the California Department of Health Services (DHS) to establish safe exposure limits for toxic air pollutants and identify Best Available Control Technology (BACT) for the control of the noncriteria pollutants of public health concern. It also requires that the New Source Review Rule (NSR) for each air pollution district include regulations that would require new or modified procedures for controlling emissions of toxic air contaminants.

- Monterey Bay Unified Air Pollution Control District Rule 424. This rule incorporates federal NESHAPS and its provisions, by reference, into the rules and regulations of the district.

- Monterey Bay Unified Air Pollution Control District Rule 1000. This rule is designed to prevent, to the maximum extent practicable, the emission of toxic air contaminants, exposure to which may cause or contribute to adverse health affects or mortality.

Hazardous Wastes

- California Health and Safety Code Sections 25100 to 25245. This Code mandates the Department of Health Services to establish regulations necessary to ensure that the generators of hazardous wastes employ proper technology and waste management practices for the handling, treatment, recycling or destruction of their hazardous wastes prior to disposal.

- The Code also establishes the liability of the generator for injuries caused by exposure to any of the hazardous wastes that may be produced.

SAFETY

Federal

- Title 49 of the Code of Federal Regulations (CFR) - Transportation. Sections of Title 49 which are applicable include Section 173.245 (Corrosive liquids not Specifically Provided For), Section 173.118a (Fuel Oil).

State

- Public Resources Code, Section 4291; Firebreaks; Trimming of Trees; Chimney Screens; Variance of Exemption of Regulation of State Forester.

- Title 8 of the California Administrative Code (CAC), Industrial Relations, Chapter 4, Subchapters 4 and 7 (Industrial Safety Orders). Applicable sections of Title 8, Chapter 4, include:

  - Subchapter 4, Section 1509, Construction; Accident Prevention Program
  - Subchapter 7, Article 107 - Dust, Fumes, Mists, Vapors and Gases
  - Subchapter 7, Article 109 - Hot, Flammable, Poisonous, Corrosive and Irritant Substances
  - Subchapter 7, Article 145 - Design, Construction and Installation of Venting, Diking, Valving and Supports
  - Subchapter 7, Section 3203, Operation; Accident Prevention Program
  - Subchapter 7, Group 20, Articles 134 to 146 - Flammable Liquids, Gases and Vapors
  - Subchapter 7, Group 27, Articles 156 to 163 - Fire Protection

- Title 22 of the California Administrative Code (CAC) Chapter 30, Article 11. Classification of Containers of Hazardous Chemicals.

- Uniform Building Code
  - Chapter 5 - Classification of all Buildings by Use or Occupancy, General Requirements for all Occupancies.
  - Chapter 19 - Type 11, One Hour and II-N Building
  - Chapter 32 - Roof Construction and Covering
  - Chapter 33 - Exits

Industry Codes and Standards

- American Concrete Institute (ACI), 349-80, Appendix B. Foundations for Welded Steel Tanks.

- American Gas Association (AGA) Standards

- American Petroleum Institute (API) Standards

  - API 650 - Storage Tanks

- American Society of Mechanical Engineers (ASME)

  - Section VIII - Tubular Heat Exchangers
  - Section X - Fiberglass Reinforced Plastic: (FRP) Vessels

- National Fire Protection Association (NFPA) Standards

  - NFPA 10 - Portable Fire Extinguishers
  - NFPA 12 - Carbon Dioxide Extinguishing Systems
  - NFPA 12A - Halon 1301 Fire Extinguishing Systems

- NFPA 12B - Halon 1211 Fire Extinguishing Systems
- NFPA 13 - Standard for the Installation of Sprinkler Systems
- NFPA 14 - Standard for the Installation of Standpipe and Hose Systems
- NFPA 15 - Water Spray Fixed System
- NFPA 17 - Dry Chemical Extinguishing Systems
- NFPA 20 - Standard for Centrifugal Fire Pumps
- NFPA 24 - Standard for Fire Service Mains and their Appurtenances
- NFPA 26 - Standard for Supervision of Valves
- NFPA 30 - Flammable and Combustible Liquids Code
- NFPA 37-1979 - Installation and Use of Stationary Combustion Engines and Gas Turbines
- NFPA 54-1 - National Fuel Gas Code
- NFPA 70 - National Electric Code
- NFPA 72E - Standard on Automatic Fire Detectors
- NFPA 214 - Cooling Towers, Water
- NFPA 496 - Purged Enclosures for Electrical Equipment
- NFPA 1961 - Standard for Fire Hose
- NFPA 1962 - Standard for Fire Hose, Care, Use
- NFPA 1963 - Standard for Fire Hose Connections; Screw Threads and Gaskets
- NFPA/NEC - Class I, Division II, Group D. Hazardous Area Designation

SOIL CONSERVATION

- California Porter - Cologne Water Quality Control Act, Water Code, Section 13282. Requires adequate protection of water quality by appropriate design, sizing, and construction of erosion and sediment controls.

- King City Municipal Code, Title 12, Ordinance Amending Adoption Reference of UBC 1982. Ordinance adopted from the 1982 Uniform Building Code, Section 7013 of Chapter 70. Sets requirements for control of run-off, topsoil stockpiling, temporary re-vegetation, and winter operations.

- Association of Bay Area Governments Manual of Standards for Erosion and Sediment Control Measures, 1981. Provides details of measures for controlling run-off and erosion related to construction activities, particularly in the San Francisco Bay area. Suggests a framework for regulation and enforcement of control measures.

- California Department of Conservation, Erosion and Sediment Control Handbook, 1981. Provides details of technical solutions to erosion and run-off control including revegetation, mulching, fertilizing, surface preparation, and drainage control measures.

STRUCTURAL ENGINEERING

Federal

- Occupational Safety and Health Administration (OSHA), Department of Labor, "Occupational Safety and Health Standards", Title 29, - Labor, Part 1910.

State

- Business and Professions Code, Chapter 7, Div. 3. A state registration is required to practice as a civil engineer or structural engineer in California.

- California Administrative Code, Title 24, Parts 2 through 6 and Part 12.

- California Administrative Code, Title 8, Chapter 4, Division of Industrial Safety.

- California State Department of Industrial Relations, Division of Industrial Safety. Labor Code § 6500. A permit is required for construction of trenches or excavations where personnel are required to descend 5 feet or deeper. This also applies to construction of any building, structure, falsework, or scaffolding more than three stories high or the equivalent heights.

- Public Resources Code Section 25532. This section requires that the California Energy Commission (CEC) establish a monitoring system to ensure that construction and operation of generation facilities are in compliance with all applicable regulations, guidelines, and conditions adopted or established by the Commission or specified in the written decision on the application.

- California Public Utilities Commission, General Order No. 95 (GO-95) - GO-95 applies to transmission line construction.

Local

- City of King City
  - Building permit for construction of facility.
  - Use permit for structures over 30 feet high.
  - Building inspection for conformance with UBC.
  - Ordinance No. 470, Adoption of Construction Codes and fee schedules.

- County of Monterey
  - Building inspection for conformance with Building Standards.
  - Ordinance No. 2973, Section 2-7 adopts 1984 edition of the National Electrical Code.

Industry Codes and Standards

General

- International Conference of Building Officials, Uniform Building Code (UBC), 1985 Edition.

Concrete

- American Concrete Institute (ACI)
  - ACI 212.2R - Guide for use of admixtures in concrete.
  - ACI 304 - Recommended practice of concrete floor and slab construction.
  - ACI 318 - Building code requirements for reinforced concrete - (ACI 318-83).
  - ACI 318.1 - Building code requirements for structural plain concrete.
  - ACI 349 - Code requirements for nuclear safety related concrete structures, Appendix B, Steel Embedments (ACI 349-80).
  - ACI 350R - Concrete Sanitary Engineering Structures.

Structural and Miscellaneous Steel

- American Institute of Steel Construction (AISC)
  - AISC 1978 - Specifications for the Design, Fabrication and Erection of Structural Steel Buildings, November 1, 1978.
  - AISC 1976 - Code of Standard Practice for Steel Buildings and Bridges, September 1, 1976.
  - AISC 1980 - Specifications for Structural Joints Using ASTM A325 or A490 Bolts, August 14, 1980.
- American Iron and Steel Institute (AISI)
  - AISI 1980 - Specifications for Design of Cold-Formed Steel Structural Members, September 3, 1980.
- American Welding Society (AWS), "Structural Welding Code"
  - AWS D1.1 - 1984.
- American Petroleum Institute (API), Welded Steel Tanks for Oil Storage
  - API 650 - 1980, Revised 1984.

- o American Water Work Association (AWWA)
  - AWWA 1964 - Steel Pipe Manual - (AWWA M11 - 64).
  - AWWA 1980 - Standard for Fabricated Electrically Welded Steel Water Pipe - (AWWA C200 - 1980).
  - AWWA 1979 - Standard for Welded Steel Tanks for Water Storage (AWWA D100 - 1979)
- o American Society for Testing and Materials (ASTM)
  - ASTM A500 - Specifications for Cold-formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
  - ASTM A569 - Specifications for Steel Carbon (0.15 maximum percent) Hot-Rolled Sheet and Strip, Commercial Quality.
  - ASTM A695 - Specifications for Coating of Zinc Mechanically Deposited on Iron and Steel.
  - Applicable standards for the various construction materials as referenced in the civil/structural specifications included in Table B-1 (Dec. 3, 1986 RT 377-81).
- o Steel Structures Paint Council (SSPC), Specifications for Steel Painting.

Wood

- o Cooling Tower Institute
  - CTI-Standard 114
  - CTI-Standard 103
- o Uniform Building Code, Chapter 25, Wood.
- o National Design Specifications for Stress - Grade Lumber and Fastenings.

TRAFFIC AND TRANSPORTATION

State

- o California Vehicle Code Section 35780 (State Department of Transportation). Transportation Permit - Approvals are required for transportation of oversize loads over state highways. Basic must provide details on the length, height, and width of the oversize load. If the load exceeds 135 feet in overall length or 14 feet in width a variance would be required. In this case, Basic must provide the following information:

1. Proof that no other mode of transport is reasonably available (letter from railroad and/or barge companies will be needed).

2. Drawings, pictures, etc., to establish the size of the load that will be transported.

3. Proof that the critical nature of technical or structural requirements be certified by the manufacturer/designer to effectively prohibit field fabrication of smaller component pieces.

4. A bona fide economic comparison furnished by the manufacturer/designer indicating the range of total costs for the various options of fabrication and transportation. This should also include an identifiable beneficiary for the cost savings projected if a variance for length and/or width is granted.

Local

- Monterey County Code, Chapter 12.77.010. Permit is required for transport of oversize loads over county roads.

- King City Ordinance. Requires truck traffic be restricted to designated truck routes.

- King City Ordinance. Requires developer to get an encroachment permit for utility relocation necessitated by the project.

- King City Standard Contract Conditions. Requires a developer to enter into contractual agreement with city that they (the developer) will restore to pre-project condition any areas damaged during project development.

- City of King General Plan, Circulation Element (1973).

TRANSMISSION LINE ENGINEERING

- California Public Utilities Commission's (CPUC) General Order 95 is the applicable transmission system engineering standard for the construction and operation of overhead transmission lines.

TRANSMISSION LINE SAFETY AND NUISANCE

Aviation Safety

- Title 49, United States Code, Annotated (USCA), Section 1348, Subdivision (a) authorizes and directs the Secretary of Transportation to develop plans for and formulate policy with respect to the use of navigable airspace; assign by rule, regulations or order the use of such navigable airspace under such terms, conditions, and limitations as deemed necessary in order to insure the safety of aircraft and the efficient utilization of such airspace.

- Title 14, Code of Federal Regulations (CFR), Part 77, Objects Affecting Navigable Airspace. Establishes standards for determining obstructions in navigable airspace and sets forth the requirements for notice to the Administrator of certain proposed construction or alteration and provides for aeronautical studies of obstructions to air navigation to determine their effect on the safe and efficient use of airspace.

- Title 14, CFR, Part 91, Section 91.79. Air Traffic and General Operating Rules. Describes minimum flight levels over congested and uncongested areas.

- Public Utilities Code, Sections 21655 to 21660. Discusses the permit requirements for construction of possible obstructions, in the vicinity of aircraft landing areas, to navigable airspace and near the boundary of airports.

- Advisory Circular (AC) No. 70/7460-1G, Obstruction Marking and Lighting. Describes marking and lighting requirements of obstructions.

Design and Construction

- GO-95 CPUC Rules for Overhead Electric Line Construction. Formulates uniform requirements for overhead line construction, the application of which will ensure adequate service and secure safety to persons engaged in the construction, maintenance, operation or use of overhead electric lines and to the public in general.

- Title 8, California Administrative Code (CAC), Section 5095--5099, General Industrial Safety Orders, establishes requirements for controlling exposure to noise.

- Title 8, California Administrative Code (CAC), Section 2940 et seq., High Voltage Electrical Safety Orders, establishes essential requirements and minimum standards for installation, operation and maintenance of electrical installation and equipment to provide practical safety and freedom from danger.

- National Electric Code (NEC). Determines the safeguards to be used to protect persons and property from electrical hazards.

Fire Hazard

- Title 14, CAC, Sections 1250-1258. Fire Prevention Standards for Electric Utilities. Provide specific exemptions from: electric pole and tower firebreak and electric conductor clearance standards and specifies when and where standards apply.

- Public Resources Code (PRC), Sections 4292-4296. Mountainous, Forest-, Brush-, and Grass-Covered Lands. Provides fire prevention measures for buildings or structures in, upon or adjoining any mountainous area or forest-, brush-, or grass-covered lands or any land covered with flammable material.

- Division II, Uniform Fire Code (UFC), Section 11-201. Defines measures to prevent the accumulation of waste material.

Communication Interference

- Title 47, CFR, Part 15, Section 15.25, Operating Requirements: Incidental Radiation. Prohibits operation of any device emitting incidental radiation that causes harmful interference to communications. The regulation also requires mitigation for any device which causes interference.

- General Order (GO-52) California Public Utilities Commission (CPUC). The Construction and Operation of Power and Communications Lines for the Prevention or Mitigation of Inductive Interference. Contains rules for location, design, construction, arrangement, operation, and maintenance of lines and apparatus to prevent or mitigate inductive interference.

Nuisance Hazards

- National Electric Safety Code (NESC), ANSI C2, Section 9, Article 92, Paragraph E, Article 93, Paragraph C, No. 6. Covers basic provisions for safeguarding of persons from hazards arising from the installation, operation and maintenance of (1) conductors and equipment in electric-supply stations, and (2) overhead and underground, electric-supply and communications lines.

Noise

- Transmission Line Safety and Nuisance: Table 1, Monterey County General Plan, Land Use Compatibility for Exterior Community Noise.

VISUAL RESOURCES

- The project is subject to King City Zoning Ordinance (Title 17) Chapters 17.30 and 17.50 for M-Industrial District and Architectural Control. For

any development in an M zone, such as the proposed project, the City has been requiring that a minimum of 10 percent of the gross land area be landscaped.

WASTE MANAGEMENT

Federal

- Clean Water Act, Title 33, United States Code Sections 1251 et seq. Under the Clean Water Act, any point-source waste discharges into the waters of the United States require a National Pollution Discharge Elimination System (NPDES) permit. In the State of California, the State Water Resources Control Board (SWRCB) administers the federal NPDES program. For the proposed project, the NPDES will be under the jurisdiction of the Central Coast Regional Water Quality Control Board (RWQCB).

- Resource Conservation and Recovery Act (RCRA) of 1976 (40 CFR Part 260). This federal legislation was recently authorized and strengthened by the Hazardous and Solid Waste Amendments of November 1984. The law defines the types of solid and liquid materials that are considered hazardous and establishes specific criteria for handling, storing, transporting, treating, and disposing of those wastes. RCRA also specifies the minimum reporting and monitoring requirements for hazardous waste generators.

  The U.S. Environmental Protection Agency (EPA) has the authority to enforce the provisions of RCRA nationally. This authority to administer a RCRA program can be delegated to a state (40 CFR 271). The California Department of Health Services (DHS) was the lead agency and had interim authority for the program under RCRA until January 31, 1986. After that date, authority for RCRA became the joint responsibility of EPA/DHS.

State

- The Porter Cologne Water Quality Act of 1967, Water Code section 13020 et seq. Under this Act, the Regional Water Quality Control Boards are required to adopt waste discharge requirements to protect the waters of the state for the use and enjoyment of the people of California.

- California Administrative Code (CAC), Title 22, Chapter 30, sets state minimum standards for the management of hazardous and extremely hazardous wastes. According to Basic a variety of potentially hazardous chemicals will be handled during construction and operation of the proposed project. These chemicals are classified as hazardous in Title 22 of CAC. If hazardous wastes are to be generated by the proposed project a Hazardous Waste Generator Permit will be required from the California Department of Health Services (DHS). If hazardous wastes are stored for

more than ninety (90) days, a Hazardous Waste Facility permit will also be required of Basic from DHS.

- California Administrative Code (CAC), Title 23, Chapter 3. This code establishes waste and site classifications and waste management requirements for waste treatment, storage, or disposal in landfills, surface impoundments (ponds), waste piles, and land treatment facilities.

WATER QUALITY

Federal

- Clean Water Act of 1977, 33 USC sections 1251 et seq. Under the Clean Water Act as amended, any point source waste discharging into waters of the United States requires a National Pollutant Discharge Elimination System (NPDES) Permit. In California the State Water Quality Control Board administers the federal NPDES program. The proposed project will be under the jurisdiction of Regional Water Quality Control Board (RWQCB), Central Coast Region.

- U.S. Environmental Protection Agency (EPA) Categorical Standards 40 CFR 423. Provisions establish: 1) effluent standards for wastewater generating from a steam electric generating station; 2) pretreatment standards for wastewater discharging to a publicly owned waste treatment system; and 3) authorize the owner/operator of a publicly owned waste treatment system to establish their own pretreatment standards commensurate with their requirements. The proposed project will be regulated by the King City Public Works Department and be based on pretreatment standards.

State

- The Porter Cologne Water Quality Control Act of 1967, Water Code, Section 13020 et seq. Under this Act, the Regional Water Quality Control Boards adopt waste discharge requirements to protect the waters of the state for the use and enjoyment of the people of California.

  The owner or operator of any facility or activity which will discharge waste that may affect quality of the waters of the state, must obtain waste discharge requirements from the appropriate Regional Water Quality Control Board.

- Title 22, Chapter 15, California Administrative Code, Domestic Water Quality Standards. This section sets maximum concentration levels (MCLs) for pollutants which may affect domestic water supplies.

Local

- The Monterey County General Plan specifies that land development be accomplished in a manner to minimize runoff and maintain groundwater recharge in vital water resources areas (Section 5.1.2), and that replenishable water supplies of suitable quality be developed to meet the county's various needs. (Section 6.0).

- King City Municipal Code Chapter 12.04, Adoption 12.04.020 Amendment #3, Section 7013 of the Uniform Building Code. This runoff-control ordinance requires control of runoff by berms, structures, pipes, catchbasins, and energy dissipators as appropriate to prevent escape of sediment from sites. Also, it requires runoff retention through the use of catchbasins, ponds, or other retention devices.

WATER RESOURCES

- California Constitution, Article 10, Section 2. Peabody v. Vallejo, 2 Cal. 2d 351, 372; 40 P. 2d, 486, 498 (1935). Constitutional Amendment prohibits the waste or unreasonable use, method of use, or method of diversion of water.

- State Water Resources Control Board (SWRCB) Resolution 75-78, Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Power Plant Cooling. According to this policy the loss of inland waters through evaporation in power plant cooling facilities may be considered an unreasonable use of inland waters when general shortages occur.

- The standard for estimating flood hazard in engineering practices for structures of this type as specified by the City of King (Bates 1986, pers. comm.). Flood level calculations should reflect a 1 in 100 chance flood/storm occurrence based on the consideration that failure of the power plant will result in interruption of electrical generation and large economic losses.

APPENDIX B

Amendment to the Power Purchase Agreement
between Applicant and Pacific Gas and Electric Company

Docket 85-AFC-5

BASIC AMERICAN FOODS

PGandE - BAF Energy, Inc.
Amendment to Power Purchase Agreement

FIRST AMENDMENT TO THE

LONG-TERM ENERGY AND CAPACITY POWER PURCHASE AGREEMENT

BETWEEN

BAF ENERGY, INC.

AND

PACIFIC GAS AND ELECTRIC COMPANY

WHEREAS, BAF ENERGY, INC., formerly named AMERICAN POTATO COMPANY, a California Corporation ("Seller") has a power purchase agreement with PACIFIC GAS AND ELECTRIC COMPANY ("PGandE") entitled LONG-TERM ENERGY AND CAPACITY POWER PURCHASE AGREEMENT ("Agreement") effective November 30, 1984;

WHEREAS, Seller has an Application for Certification, Docket 85-AFC-5, pending before the California Energy Commission (CEC);

WHEREAS, the CEC requires dispatchability as a condition to certification of the Facility;

WHEREAS, Seller's Facility experiences its peak process thermal load during PGandE's peak months of June, July and August;

WHEREAS, Seller requests and PGandE consents to amend the Agreement to provide increased operating flexibility;

WHEREAS, On July 7, 1986, Seller filed Complaint No. 86-07-022 ("Complaint") against PGandE with the California Public Utilities Commission ("CPUC"), which by CPUC Decision No. 86-10-038 issued October 22, 1986, was partially consolidated with Application 82-04-044, et al. for the purpose of resolving the firm capacity pricing issue raised in Seller's Complaint;

WHEREAS, on January 26, 1987, PGandE filed a writ of review with the California Supreme Court (S. F. No. 25114) seeking review of CPUC Decision Nos. 86-10-038, 86-12-013 and 86-12-104;

WHEREAS, Seller and PGandE are unable to agree upon the availability of fixed firm capacity prices for firm capacity availability dates after 1987 in Table E-2 of the Agreement, and the availability of fixed energy prices for energy delivered after 1997 in Table B-1 of the Agreement, and accordingly desire to defer resolution of these issues to the CPUC's decisions in Application No. 82-04-044, et al. as those decisions may be confirmed, modified or revised on appeal, including without limitation by the California Supreme Court in S. F. No. 25114.

THEREFORE, Seller and PGandE hereby agree to amend the Agreement ("Amendment") as follows:

1. DEFINITIONS

(a) For the purpose of the Amendment, the following definitions apply:

Dispatch Period 1 - January 1 through April 30

Dispatch Period 2 - May 1 through September 30

Dispatch Period 3 - October 1 through December 31

Term of amendment - The time period that this Amendment will remain in effect as provided in paragraph 7 of the Amendment.

Curtailable hours - The hours, as follows, during which Seller will not operate the Facility, unless PGandE's Specific Operating Orders explicitly instruct Seller to operate:

- o Dispatch Period 1: All hours

- o Dispatch Period 2: Six hours daily. These hours shall be scheduled to occur during the hours of low demand on PGandE's system. Currently the six hours are scheduled to occur midnight to six a.m. Whenever the CPUC authorizes changes in the time periods set forth in Table B-4 of Interim Standard Offer No. 4 Power Purchase Agreements, PGandE may reschedule these six hours to

coincide with changes in the occurrence of low demand on PGandE's system. To the extent consistent with the parties' intent that the curtailable hours coincide with PGandE's low system demand, the new schedule shall follow the changes authorized in Table B-4.

o Dispatch Period 3: Twenty-four hours Sunday and holidays, and ten hours daily, Monday through Saturday. The ten hours shall be scheduled to occur during the hours of low demand on PGandE's system. Currently the ten hours are scheduled to occur 10:30 p.m. to 8:30 a.m., Monday through Saturday; 24 hours Sunday and holidays. Whenever the CPUC authorizes changes in the time periods set forth in Table

B-4 of interim Standard Offer No. 4 Power Purchase Agreements, PGandE may reschedule the ten hours daily, Monday through Saturday, to coincide with changes in the occurrence of low demand on PGandE's system. To the extent consistent with the parties' intent that the curtailable hours coincide with PGandE's low system demand, the new schedule shall follow the changes authorized in Table B-4.

Specific Operating Orders - A communication issued via telephone by the designated PGandE switching center to Seller at its designated telephone number regarding operation of the Facility, including identification of the curtailable hours during which PGandE explicitly instructs Seller to operate the Facility.

(b) Underlined terms, other than those defined above, shall have the meaning stated in

APPENDIX A, Section A-1 DEFINITIONS, of the Agreement.

2. For the term of amendment, add at the end of ARTICLE 3 PURCHASE OF POWER, page 6, line 16, the following:

"(h) Within the first thirteen months following the date of initial energy deliveries, Seller may test the Facility for a total period aggregating no more than six months. During this aggregate period of six months:

(i) Seller shall coordinate all testing with PGandE;

(ii) PGandE will not impose limitations except under those conditions outlined in Appendix A, Section A-7, INTERRUPTION OF DELIVERIES of the Agreement;

(iii) PGandE shall pay Seller for energy deliveries at prices equal to PGandE's full short-run avoided operating costs; subject to paragraph 3(b)(1) of the Amendment;

(iv) PGandE shall not pay Seller for capacity prior to the firm capacity availability date; and

(v) PGandE shall not pay Seller for start-up of the Facility.

(i) Thirteen months after the date of initial energy deliveries or when Seller notifies PGandE that it has completed all testing, whichever event occurs first, Seller shall curtail the Facility in accordance with Article 7, CURTAILMENT of the Agreement, as amended by paragraph 6 of the Amendment."

3. ARTICLE 4 ENERGY PRICE

(a) For the term of agreement, at page 6, line 19 replace:

"surplus energy output" with "net energy output."

(b) For the term of amendment, on page 7 of the Agreement, delete the provisions following the heading "Energy Payment Option 1 - Forecasted Energy Prices" (lines 3 through 23) and substitute:

"(1) Commencing on the firm capacity availability date, Seller shall be paid for energy delivered as follows:

(i) during Dispatch Period 1 at prices equal to PGandE's full short-run avoided operating costs;

(ii) during Dispatch Period 2 at prices equal to 20 percent of the prices set forth in Table B-1, Appendix B of the Agreement, plus 80 percent of PGandE's full short-run avoided operating costs; and

(iii) during Dispatch Period 3 at prices equal to 20 percent of the prices set forth in Table B-1, Appendix B of the Agreement, plus 80 percent of PGandE's full short-run avoided operating costs.

(2) Commencing on the firm capacity availability date, Seller shall be paid for start-ups of the Facility as follows:

(i) in Dispatch Period 1, for start-ups which Seller undertakes in compliance

with Article 7(a) and (c), CURTAILMENT of the Agreement, as amended by paragraphs 6(a) and 6(c) of the Amendment;

(ii) in Dispatch Period 2, for start-ups which Seller undertakes in compliance with Article 7(b) and (c), CURTAILMENT of the Agreement, as amended by paragraphs 6(b) and 6(c) of the Amendment;

(iii) the start-up payment for Dispatch Period 1 and Dispatch Period 2 shall be calculated as follows:

Start-up Payment ($) = 1142 MMBtu X G

Where G = The incremental fuel price in $ per MMBtu published in PGandE's Energy Prices for Qualifying Facilities or its successor publication;

(iv) the payment for start-ups of the Facility during Dispatch Period 3 is zero (0) dollars; and

(v) PGandE shall not pay Seller for shut-down of the Facility."

4. Article 5, CAPACITY ELECTION AND CAPACITY PRICE

(a) For the term of agreement, at page 10, modify the first sentence after "Firm capacity"- (lines 13 -15) as follows:

"111,000 kW for 30 years from the firm capacity availability date with payment determined in accordance with Appendix E of the Agreement; provided, however, that for the term of amendment, payment during Dispatch Period 1 shall be determined in accordance with Appendix G of the Amendment."

5. For the term of amendment, in ARTICLE 6, LOSS ADJUSTMENT FACTORS, page 11, delete the first paragraph (lines 3 to 5) and replace it with the following:

"If 1,431 KCM conductors are installed on the transmission line to Coburn Substation, a

Capacity Loss Adjustment Factor of 1.000 will be applied to calculate the firm capacity payment to Seller. If smaller conductors are installed, the Capacity Loss Adjustment Factor will be that specified in Table E-1 of the Agreement."

6. For the term of amendment, delete the provisions following ARTICLE 7, CURTAILMENT, page 11 (lines 19 - 26) replace it with the following:

"(a) During Dispatch Period 1 Seller shall not deliver any energy unless PGandE issues Specific Operating Orders that instruct Seller to operate.

(b) During Dispatch Period 2 and Dispatch Period 3, Seller shall not deliver any energy during the curtailable hours, except when:

(i) PGandE issues Specific Operating Orders that instruct Seller to operate;

(ii) at the beginning of the curtailable hours, Seller is in the process of shutting down its Facility, provided that Seller shall exercise best efforts to shut down the Facility as

rapidly as possible, and shall complete the shut-down within thirty minutes of the start of the curtailable hours; or

(iii) either of the conditions specified in Article 7 of the Agreement, as amended by paragraph 6(d) of the Amendment, exists.

(c) Specific Operating Orders for Dispatch Period 1, Dispatch Period 2 and Dispatch Period 3 shall:

(i) instruct Seller to operate the Facility a minimum of six hours from the time when firm capacity is reached, provided that the Facility takes no more than 5.5 hours from a cold start or 1.25 hours from a hot start to reach firm capacity. A failure to meet the above stated start-up time limits will result in Seller not receiving a start-up payment as provided in Article 4(b)(2) of the Agreement, as amended by paragraph 3(b)(2) of the Amendment;

(ii) not instruct Seller to start the Facility more than once in any single calendar day; and

(iii) not instruct Seller to shut down the Facility more than once in any single calendar day.

(d) If Specific Operating Orders are not issued, Seller may operate the Facility during the curtailable hours in Dispatch Period 2 and Dispatch Period 3, if either Condition 1 or Condition 2 described below exists:

Condition 1 is when there is demand for steam for food processing at Seller's existing plant and one or both auxiliary boilers are unavailable due to a forced outage.

Condition 2 is when there is demand for steam for food processing at Seller's existing plant and operation of the auxiliary boilers would result in violation of the 1500-hour annual limit on auxiliary boiler operation as stated in the air quality permit issued by the Monterey Bay Unified Air Pollution Control District.

(i) Seller shall exert best efforts to prevent the occurrence of Condition 1 and Condition 2;

(ii) Seller shall notify the designated PGandE switching center, specified in Article 10 of the Agreement, at the beginning and end of any occurrence of Condition 1 or Condition 2. Seller shall, within 48 hours of the occurrence of either condition, submit a written explanation to PGandE stating with particularity the cause of the condition and the steps Seller has taken or will take to restore the auxiliary boiler(s) to operating condition;

(iii) PGandE shall pay Seller for energy delivered during Condition 1 and Condition 2 at prices equal to PGandE's full short-run avoided operating costs; and

(iv) PGandE shall not pay Seller for start-up of the Facility resulting from the occurrence of Condition 1 or Condition 2.

(e) PGandE will notify Seller in writing ("Notification") by December 1, April 1 and September 1 of each year of its nonbinding

estimate whether or not it will instruct Seller to operate the Facility during the following Dispatch Period. If PGandE intends to instruct Seller to operate the Facility, the Notification will provide a nonbinding schedule of operation for the Facility. The December 1 Notification will include a statement of preference for the timing of the Facility's annual scheduled maintenance outage ("ASMO") in Dispatch Period 1. Seller shall notify PGandE by November 1 of each year of the expected start date and duration of the ASMO and any restrictions on the timing of the ASMO. Seller and PGandE shall agree on the schedule dates for the ASMO by the last full working day in December.

(f) If PGandE elects to instruct Seller to deliver power during the curtailable hours in Dispatch Period 1, Dispatch Period 2 or Dispatch Period 3, PGandE will do so by issuing Specific Operating Orders through the designated PGandE switching center. The Specific Operating Order will give Seller at least 72 hours advance notice of the start of operation, except:

(i) When PGandE needs power in an emergency; or

(ii) During Dispatch Period 1 when PGandE instructs Seller to operate to demonstrate availability. PGandE shall not instruct Seller to demonstrate availability more than two times per calendar month.

(iii) Seller shall be considered in noncompliance with Specific Operating Orders for purposes of Article 7(h) of the Agreement, as amended by paragraph 6(h) of the Amendment, if Seller fails to attain firm capacity within twelve hours after PGandE has instructed Seller to operate because of an emergency or to demonstrate availability as provided above in subparagraphs (i) and (ii).

(g) Seller shall notify the designated PGandE switching center by noon, each Friday during Dispatch Period 1, of the availability or unavailability of the Facility for the following week beginning midnight, Sunday. If Seller notifies the designated PGandE switching center that the Facility is unavailable, Seller's Facility will be considered unavailable until Seller notifies designated PGandE switching

center that the Facility is available. Seller must immediately notify the Designated PGandE switching center of any change in the status of availability of the Facility. PGandE will not issue Specific Operating Orders for periods when Seller notifies PGandE that the Facility is unavailable in accordance with the preceding requirements, or when Seller provides the notices required for scheduled maintenance in accordance with Section E-3 SCHEDULED MAINTENANCE, Appendix E of the Agreement.

(h) Subject to Article 7(f) (iii) of the Agreement as amended by paragraph 6(f)(iii) of the Amendment, if during Dispatch Period 1 Seller fails to comply ("noncompliance") with Specific Operating Orders the following shall apply:

(i) The Facility will be considered unavailable until Seller demonstrates the Facility is available in accordance with paragraph 6(i) of the Amendment, and

(ii) PGandE and Seller agree that Seller's noncompliance will damage PGandE and that it would be extremely difficult to fix the actual damages to PGandE resulting from such noncompliance. Accordingly, PGandE

and Seller agree that PGandE shall deduct $5,000 as liquidated damages from PGandE's payments to Seller for each noncompliance, unless Seller proves that the noncompliance resulted from mechanical failure during start-up.

(i) Demonstration of the Facility's availability, as required in Article 7(h) of the Agreement, as amended by paragraph 6(h) of the Amendment, shall consist of operation of the Facility at firm capacity for a minimum of six continuous hours. Seller shall be paid for energy during the demonstration at full short-run avoided operating costs. Seller shall not be paid for start-ups resulting from the demonstration. Upon successful demonstration of the Facility's availability, the Facility will be considered available from the hour that the demonstration began for purposes of firm capacity payments.

7. TERM OF AMENDMENT

(a) This Amendment shall be binding upon execution by PGandE's and Seller's authorized representatives and remain in effect thereafter for a ten-year period commencing on the firm capacity availability date. Prior to the end of

the term of amendment, Seller and PGandE by mutual agreement may extend the term of amendment.

(b) Except as expressly modified by this Amendment, the provisions of the Agreement shall remain unchanged.

8. Seller shall within 30 days of the execution of this Amendment file a request for dismissal with prejudice of its Complaint No. 86-07-022 which it filed on July 7, 1986 against PGandE, and shall use its best efforts to secure such dismissal as soon as practicable.

9. In the event the firm capacity availability date is after 1987, the firm capacity price and the price for energy and as-delivered capacity delivered after 1997 shall be determined in accordance with CPUC Decision Nos. 86-10-038, 86-10-104 and 86-12-013, as those decisions may be modified by judicial order or otherwise.

10. Seller and PGandE waive and release any and all claims, demands, causes of actions, losses, expenses, fees, damages (compensatory, punitive, exemplary, statutory or otherwise), or other right to relief, whether based on contract, tort, statute, or other

legal or equitable theory of recovery which, as of the date of this Amendment, each may have against the other or any of its subsidiaries, affiliates, officers, directors, agents or shareholders, arising out of or related to the subject matter of the complaint or the negotiation or subject matter of this Amendment. This release does not waive any right or remedy that Seller may have now or in the future with regard to an extension or suspension of the Article 12 five-year period (in which energy deliveries must start or the Agreement terminates), provided, however, Basic hereby releases PGandE from any and all losses, costs, expenses, fees or damages (compensatory, punitive, exemplary, statutory or otherwise) related to such right or remedy.

11. PGandE and Seller shall support the reasonableness of the Amendment before any government authority of competent jurisdiction in a proceeding involving a review of the Amendment for purposes of allowance or disallowance in rates charged by PGandE.

12. As a condition precedent to the effectiveness of this Amendment and the dismissal of Seller's Complaint, PGandE and Seller shall submit the Amendment to the CPUC and obtain a determination that the provisions hereof are reasonable and that PGandE acted prudently in negotiating this Amendment. Seller and PGandE

shall jointly submit and defend the reasonableness of the Amendment before the CPUC.

IN WITNESS WHEREOF, Seller and PGandE have caused this Amendment to be executed by their duly authorized representatives as of the last date set forth below.

BAF ENERGY, INC.	PACIFIC GAS AND ELECTRIC COMPANY
BY D A Britt	BY Robert J Haywood
DONALD A. BRITT	
TITLE: PRESIDENT	TITLE:
DATE SIGNED: May 26, 1987	DATE SIGNED: May 28, 1987

APPENDIX G

FORMULA FOR CALCULATING
MONTHLY PAYMENT FOR FIRM CAPACITY
DURING DISPATCH PERIOD 1

(1) Determine the availability of the Facility as follows:

$$A\ (\%) = 100\ (H - T - SM) / (H - SM)$$

A = The percent of the time the Facility is available to deliver power.

H = The number of hours each month.

T = Number of hours each month, other than during scheduled maintenance outage, when the Facility is unavailable to deliver power.

SM = Number of hours each month when the Facility is unavailable to deliver power due to scheduled maintenance outage.

(2) Determine the Availability Factor (AF) as follows.

i) When A is less than 50 percent; then AF = 0.

ii) When A is greater than or equal to 50 percent; then AF is defined as the lesser of 1 or the following quantity.

$$AF = \frac{(A - 50)}{60} + 0.5 \qquad (< \text{or} = 1.0)$$

(3) The adjusted monthly payment for firm capacity is determined by multiplying AF by the monthly payment for firm capacity with MCF = 1.0, as determined in Appendix E-5 (3) of the Agreement.

APPENDIX C

Compliance Monitoring Plan

General Provisions

APPENDIX C

COMPLIANCE PLAN GENERAL PROVISIONS

Section 25532 of the Public Resources Code provides that the California Energy Commission (CEC) shall establish a monitoring system to assure that a certified facility is constructed and operated in compliance with air and water quality, public health and safety, environmental, and other applicable regulations, guidelines, and conditions adopted or established by the CEC and specified in the written decision on the Application for Certification (AFC). The project compliance plan is formulated to satisfy that directive.

The CEC's jurisdiction extends only to the power plant and related facilities, the transmission tapline to the point of interconnection with the power grid, and the fuel system from the major distribution system or existing storage facility.

Significant features of the plan include:

- Utilization of delegate agencies, where possible, to monitor specific elements of the compliance plan.
- A compilation of all compliance conditions of certification.
- Compliance verification of each condition by a qualified professional.
- Periodic compliance reports filed by the licensee.
- An annual compliance report filed by the licensee.
- Dispute resolution procedures.

Delegate Agencies

The Warren-Alquist Act provides the CEC with exclusive siting authority for thermal power plants and related facilities 50 MW or greater (Public Resources Code, Sections 25500 and 25120). To the extent permitted by law, the CEC may delegate authority for compliance verification to various state and local agencies who have expertise in subject areas where specific requirements have been established as a condition of site certification. (See Public Resources Code Section 25532.) If a delegate agency is unwilling or unable to participate in this program, the CEC shall establish an alternative method of verification. Whenever an agency's responsibility for a particular area is transferred by law to another entity, all references to the original agency shall be interpreted to apply to the successor entity.

Verification of Compliance

Each condition described in the compliance section is followed by a means of verification. The verifications are not intended to be a part of the conditions, but are the CEC Compliance Unit's procedures to ensure post-certification compliance with adopted conditions. As such, the verification

procedures may be modified by Staff as necessary to carry out the compliance monitoring mandate, without Commission approval.

Verification of compliance with the terms and conditions of certification will be accomplished by: periodic compliance reports filed by Basic Foods, by appropriate letters from delegate agencies verifying compliance, by auditing project records, or by inspecting the power plant site and related facilities. The Compliance Project Manager, or other designated CEC staff and associates, shall be granted access to the power plant and related sites, at reasonable times to conduct audits, surveys, or general site visits.

Periodic Compliance Reports

Periodic compliance reports, as required by the compliance plan, are to be submitted by the licensee to the CEC and shall be filed at least once each quarter within 45 days after the end of the reporting quarter. These reports shall be numbered consecutively, and contain as a minimum:

- The current project construction or operating status.
- A listing of compliance plan requirements scheduled during the reporting period, with a corresponding description of the status of the requirements, i.e., completed, not started, or in progress.
- For those compliance plan requirements which the licensee had expected to satisfy during the reporting period but which were not satisfied, include a statement of how and when the licensee intends to satisfy the requirements.
- A listing of any changes to the compliance plan which has resulted from negotiations between the licensee and the CEC or its delegate agencies.
- Notification of related filings made with other governmental agencies having permitting authority over any aspect of the project.

Annual Compliance Report

The licensee shall submit annual compliance reports to the CEC containing the information required by the compliance plan. An explanation shall be provided for any missing information, including an estimate as to when the information will be provided. The annual report shall also summarize the primary compliance activities during the previous year. These reports shall be filed within 45 days after the end of the reporting period. Annual Compliance Reports shall commence one year after the date of certification.

Compliance Project Manager

The CEC shall designate a Compliance Project Manager (CPM). The assigned CPM shall be responsible for implementing the approved compliance plan after certification, for documenting and tracking compliance plan filings, for maintaining the compliance record files, and for initiating the dispute resolution procedures, if required.

All correspondence pertaining to compliance matters should be addressed as follows:

Compliance Project Manager (85-AFC-5)
California Energy Commission (MS-2000)
1516 Ninth Street
Sacramento, CA 95814

Noncompliance

Any person or agency may file a complaint alleging noncompliance with the conditions of certification. Such a compliant will be subject to review by the CEC and can result in proceedings pursuant to Title 20, California Administrative Code, Sections 1230 et seq.

Enforcement

The CEC's legal authority to impose legal sanctions for noncompliance is specified in Title 20, California Administrative Code, Sections 1230 et seq. and California Public Resources Code, Sections 25531(c), 25532, 25534, and 25900 et seq. Moreover, to ensure compliance with the terms and conditions of certification and applicable laws, ordinances, and standards, delegate agencies, as set forth in this document, are authorized to take any action allowed by law in accordance with their statutory authority, regulations, and administrative procedures.

Compliance Record

The licensee shall maintain, for the life of the project, files of all "as built" documents referenced in this report. Staff of the CEC and delegate agencies shall upon reasonable notification, be given access to the files.

The CEC shall maintain as a public record:

- All attestations to the fulfillment of legal requirements.
- All periodic and annual compliance reports filed by the licensee.
- All documents relative to complaints of noncompliance filed with the CEC.

Confidential Information

Any information which the licensee deems proprietary shall be submitted to the Executive Director pursuant to Title 20, California Administrative Code, Section 2505. Any information which is determined to be confidential shall be kept confidential as provided for in Title 20, California Administrative Code, Sections 2501, et seq.

Dispute Resolution Procedure

The following mediation procedure is designed to informally resolve, when possible, disputes concerning interpretation of compliance with the requirements of the Compliance Plan. The licensee, the CEC, or any other party may

initiate this procedure when time is critical in resolving a problem or when the alleged noncompliance does not appear significant enough to warrant a more formal investigation and proceeding.

The procedure is not intended to be a substitute for, or prerequisite to, the more formal complaint and investigation procedure specified in Title 20, California Administrative Code, Sections 1230 et seq. Nor may the procedure be used to change the terms and conditions of certification as approved by the CEC.

The procedure encourages all parties involved in a dispute to discuss the matter and to reach an agreement resolving the dispute. If a dispute cannot be resolved, then the matter must be referred to the CEC for consideration.

Request for Informal Investigation

Any individual, group, or agency may request the CEC to conduct an informal investigation of an alleged noncompliance with the CEC's terms and conditions of certification. All requests for an informal investigation shall be made to the designated CEC CPM.

Upon receipt of a request for investigation, the CPM shall promptly notify the licensee, by telephone and subsequently by letter, of the allegation. All known and relevant information of the alleged noncompliance shall be provided to the licensee and to the CEC staff. The licensee shall promptly investigate the matter and within seven working days provide a written report of the results of the investigation, including corrective measures proposed or undertaken, to the CPM. Depending on the urgency of the noncompliance matter, the CPM may request the licensee to provide an initial report, within 48 hours, followed by a written report filed within 7 days.

Request for Informal Meeting

In the event that either the party requesting an investigation or the CEC staff is not satisfied with the licensee's report, investigation of the event, or corrective measures undertaken, either may, by written request to the CPM, request a meeting with the licensee. Such request shall be made within 14 days of the licensee's filing of its written report. Upon receipt of such a request, the CPM shall:

- Immediately schedule a meeting with the requesting party and the licensee, to be held at a mutually convenient time and place.

- Secure the attendance of appropriate CEC staff and staff of any other agency with general jurisdiction and expertise in the subject area of concern.

- Conduct such meeting in an informal and objective manner so as to encourage the voluntary settlement of the dispute in a fair and equitable manner.

- Promptly after the conclusion of such meeting, prepare a memorandum which fairly and accurately identifies the positions of all parties and any conclusions reached and distribute copies to all attendees.

Request for Commission Hearing

If either the licensee, CEC staff, or the party requesting an investigation is not satisfied with the results of said informal meeting, such party may, within 10 working days, request in writing, a hearing before the Commission's Siting and Regulatory Procedures Committee. The Committee shall, upon receipt of a written request stating the basis of the dispute and the attempt at informal resolution thereof, grant a hearing on the matter, consistent with the requirements of noticing provisions, and shall have authority to consider all relevant facts involved and make any appropriate orders consistent with its jurisdiction.

Appeal from Committee to Commission

Pursuant to Title 20, California Administrative Code, Section 1215, the licensee, CEC staff, or the party requesting an investigation, may request full Commission review of any Committee Order or Decision.

Amendment to Decision

Any proposed change to the Conditions for Certification, with the exception of the Verifications, as contained in the Commission Decision will require a modification of the Decision. Such changes shall be made according to the following procedure:

The Siting and Environmental Division (SED) staff, power plant developers, and agencies which participated in the AFC proceedings shall be required to submit, in writing, to the SED Compliance Unit staff any request for a postcertification change to the Conditions for Certification.

Upon receiving a request, Staff shall notify interested parties of the request to allow them the opportunity to comment on the proposed change.

Staff shall investigate the request and upon completion of its investigation, submit its recommendation on approval of the request to the Commission for consideration and Commission actions. Any approval of changes to the Conditions for Certification shall come from this Commission.

APPENDIX D

Exhibit List

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Application for Certification of Basic Foods' AMERICAN 1 COGENERATION PROJECT	)	Docket No. 85-AFC-5
	)	
	)	

EXHIBIT LIST

Exhibit Number	
1	Application For Certification (AFC) dated September 20, 1985; Submitted by Applicant on November 5, 1986.
2	Amendment to the AFC dated July 11, 1986; Submitted by Applicant on November 5, 1986.
3	Amendment to the AFC dated August 29, 1986; Submitted by Applicant on November 5, 1986.
4	Responses to Data Requests Numbers 30-34 (Civil Engineering); Submitted by Applicant on November 24, 1986.
5	Responses to Data Requests Numbers 35, 55, 59, and 228 (Electrical Engineering); Submitted by Applicant on November 24, 1986.
6	Responses to Data Requests Numbers 28, 29, 83, 160 and 182 (Engineering Geology); Submitted by Applicant on November 24, 1986.
7	Responses to Data Requests Numbers 36-42, 52, 53, 57, 58, 60, 61, 64, 66, 222, 223, 226, 227, and 231 (Mechanical Engineering); Submitted by Applicant on November 24, 1986.
8	Responses to Data Requests Numbers 2, 3, and 166 (Soil Conservation); Submitted by Applicant on November 24, 1986.
9	Responses to Data Requests Numbers 67-70 (Transmission Line Safety and Nuisance); Submitted by Applicant on November 24, 1986.

EXHIBIT LIST (Continued)

Exhibit Number	
10	Responses to Data Requests Numbers 26 and 164 (Waste Management); Submitted by Applicant on November 24, 1986.
11	Responses to Data Request Number 1 (Biological Resources); Submitted by Applicant on November 24, 1986.
12	Responses to Data Requests Numbers S-1, S-2, and S-3 (Socioeconomics); Submitted by Applicant on November 24, 1986.
13	Responses to Data Requests Numbers 23-25 (Noise); Submitted by Applicant on November 24, 1986.
14	Responses to Data Requests Numbers 4-7 (Water Quality); Submitted by Applicant on November 24, 1986.
15	Responses to Data Requests Numbers 8, 9 and 165 (Water Resources); Submitted by Applicant on November 24, 1986.
16	Responses to Data Requests Numbers 197-202 (Ammonia); Submitted by Applicant on November 24, 1986.
17	Responses to Data Requests Numbers 43a, c, g-k, and 44-47 (Safety); Submitted by Applicant on November 24, 1986.
18	Responses to Data Requests Numbers 74-78, 180 (Transmission Line Engineering); Submitted by Applicant on December 3, 1986.
19	Responses to Data Requests Numbers 71-73 (Transmission Line System Evaluation); Submitted by Applicant on December 3, 1986.
20	Responses to Data Requests Numbers 54, 56, 62, 63, 64, 65, 220, 221, 224, 225, 229, 230, 232 (Cogeneration Criteria); Submitted by Applicant on December 3, 1986.
21	Responses to Data Requests Numbers 48, 49, 51, 79, 82, 176-78, 203-06, 219 (Power Plant Reliability); Submitted by Applicant on December 3, 1986.
22	Responses to Data Requests Numbers 43b, d, e and f, 80, 81, 84-159, 161-63, 181, 183-91, 207-12, 233-36 (Structural Engineering); Submitted by Applicant on December 3, 1986.

EXHIBIT LIST (Continued)

Exhibit Number	
23	Responses to Data Requests Numbers 27, 175, 196 (Public Health); Submitted by Applicant on December 3, 1986.
24	Responses to Data Requests Number 179 (Alternatives); Submitted by Applicant on December 3, 1986.
25	Applicant's Witnesses' prepared testimonies on Demand Conformance dated 12/8/86; Submitted by Applicant on December 22, 1986.
26	Comparison of Basic's and Staff's assumptions and modeling approach (American I demand conformance analysis) dated 12/22/86; Submitted by Floyd E. Davis (Applicant) on December 22, 1986.
27a	Utility Displacement Credits: Table 1; dated 12/22/86; Submitted by Richard Grix (staff) on December 23, 1986.
27b	Utility Displacement Credits: Table 2; dated 12/22/86; Submitted by Richard Grix (staff) on December 23, 1986.
27c	Utility Displacement Credits: Table 3; dated 12/22/86; Submitted by Richard Grix (staff) on December 23, 1986.
27d	Utility Displacement Credits: Table 4; dated 12/22/86; Submitted by Richard Grix (staff) on December 23, 1986.
28a	Staff ELFIN Simulations Output Data; dated 12/23/86; Submitted by Richard Grix (staff) on December 23, 1986.
28b	Errata to Staff's ELFIN Simulations Output Data; dated 12/23/86; Submitted by Richard Grix (staff) on December 23, 1986.
29	PGE - PGandE Sales and Exchange Agreement, 1972; dated 12/23/86; Submitted by Richard Grix (staff) on December 23, 1986.
30	BPA - PGandE Power Sales Contract, 8-23-66; dated 12/23/86; Submitted by Richard Grix (staff) on December 23, 1986.

EXHIBIT LIST (Continued)

Exhibit Number	
31	Figure III-2(b) Illustration of Pumped Storage Dispatch; dated 12/23/86; Submitted by Richard Grix (staff) on December 23, 1986.
32	Letter from PGandE regarding: Summary of the Proposed Amendment to Basic American Food's Standard Offer 4 Power Purchase Agreement; dated 12/23/86; Submitted by Applicant on December 23, 1986.
33	Letter Agreement Between Basic Vegetable Products, Inc. and King City Union School District dated February 5, 1987; Submitted by Applicant on February 23, 1987.
34	AFC Supplement dated December 30, 1986; Submitted by Applicant on February 23, 1987.
35	Letter dated February 20, 1987 from Allan J. Thompson, JACKSON, TUFTS, COLE & BLACK, regarding: First Amendment to the Long-Term Energy and Capacity Power Purchase Agreement and the related letter of Robert P. Tiernan dated February 19, 1987; Submitted by Applicant on February 23, 1987.
36	Letter dated December 19, 1986 from James R. Leahy, Basic American Foods regarding: Written Confirmation of advice from Basic's Financial Advisor; Submitted by Applicant on February 23, 1987.
37	Applicant's Supplemental testimony regarding Demand Conformance; dated December 30, 1986; Submitted by Applicant on February 23, 1987.
38	Staff's Revised Demand Conformance Testimony dated February 20, 1987; Submitted by Staff on February 23, 1987.
39	American I Ratepayer Cost Analysis dated February 20, 1987; Submitted by Applicant on February 24, 1987.
40	Amended Power Purchase Agreement executed May 28, 1987; Submitted by Applicant on June 11, 1987.
41	Withdrawn by Applicant, June 11, 1987.
42	Various letters regarding Emission Reduction Credits; Submitted by Applicant on June 11, 1987.

EXHIBIT LIST (Continued)

Exhibit Number	
43	Letter regarding Texaco Emission Reduction Credit dated June 1, 1987; Submitted by Applicant on June 11, 1987.
44	"Staff Statement on Mitigation Proposal" dated June 11, 1987; Submitted by Staff on June 11, 1987.

APPENDIX E

Proof of Service List

STATE OF CALIFORNIA

State Energy Resources
Conservation and Development Commission

In the Matter of: Application for Certification for Basic Foods' AMERICAN I COGENERATION PROJECT	)	DOCKET NO. 85-AFC-5

PROOF OF SERVICE

I, _____, declare that on _____, 1987 I deposited copies of the attached _____ in the United States mail at Sacramento, California, with first class postage thereon fully prepaid and addressed to the following, with the exception of those at the Commission's headquarters which were delivered to the Commission Docket Unit, for their distribution.

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I am and was at the time of the service of the attached paper over the age of 18 and not a party to the proceeding. I declare under penalty of perjury that the foregoing is true and correct.

_____

_____
(name)

Attachment